

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING


FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL				1. WELL NAME and NUMBER NBU 921-19D2DS		
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				3. FIELD OR WILDCAT NATURAL BUTTES		
4. TYPE OF WELL Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES		
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.				7. OPERATOR PHONE 307-752-1169		
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217				9. OPERATOR E-MAIL Laura.Gianakos@anadarko.com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU 0581		11. MINERAL OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
13. NAME OF SURFACE OWNER (if box 12 = 'fee')				14. SURFACE OWNER PHONE (if box 12 = 'fee')		
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')				16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Ute Tribe		18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	482 FNL 1356 FWL	NWNW	19	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	365 FNL 680 FWL	NWNW	19	9.0 S	21.0 E	S
At Total Depth	365 FNL 680 FWL	NWNW	19	9.0 S	21.0 E	S
21. COUNTY UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet) 365		23. NUMBER OF ACRES IN DRILLING UNIT 2400		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 510		26. PROPOSED DEPTH MD: 10582 TVD: 10463		
27. ELEVATION - GROUND LEVEL 4794		28. BOND NUMBER WYB000291		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496		

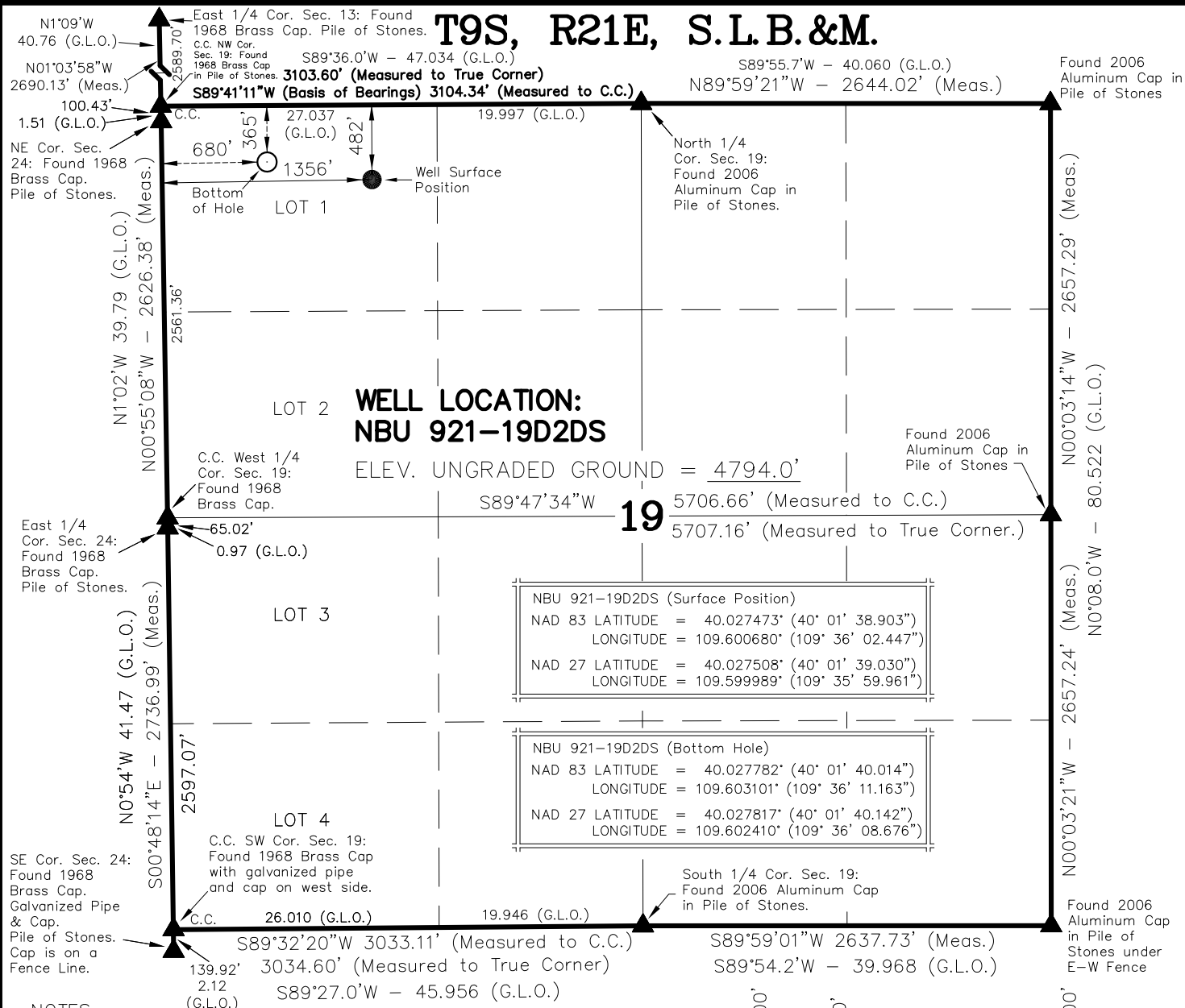
ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP
NAME Danielle Piernot	TITLE Regulatory Analyst
SIGNATURE	DATE 04/09/2010
API NUMBER ASSIGNED 43047510540000	PHONE 720 929-6156
	EMAIL gnbregulatory@anadarko.com
	APPROVAL  Permit Manager

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10582		
Pipe	Grade	Length	Weight			
	Grade HCP-110 LT&C	813	11.6			
	Grade I-80 Buttruss	9769	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2460		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	2460	28.0			

T9S, R21E, S.L.B.&M.**NOTES:**

- ▲ = Section Corners Located
- Well footages are measured at right angles to the Section Lines.
 - G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
 - The Bottom of hole bears N80°29'31"W 687.49' from the Surface Position.
 - Bearings are based on Global Positioning Satellite observations.
 - Basis of elevation is Tri-Sta "Two Water" located in the NW 1/4 of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

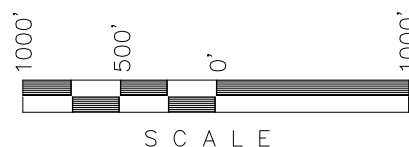
Kerr-McGee
Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

NBU 921-19D2DS
WELL PLAT

365' FNL, 680' FWL (Bottom Hole)
LOT 1 OF SECTION 19, T9S, R21E,
S.L.B.&M. UTAH COUNTY, UTAH.

CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

**SURVEYOR'S CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 362251
STATE OF UTAH

Kerry R. Kay

TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.

209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 01-07-09	SURVEYED BY: M.S.B.	SHEET 4 OF 13
DATE DRAWN: 01-13-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised: 07-01-09	



ANADARKO PETROLEUM CORP.

UINTAH COUNTY, UTAH (nad 27)

NBU 921-19D PAD

NBU 921-19D2DS

NBU 921-19D2DS

Plan: PLAN #1 11-16-09 RHS

Standard Planning Report

16 November, 2009



'APIWellNo:43047510540000'



NBU 921-19D2DS
 UINTAH COUNTY, UTAH (nad 27)
 482 FNL 1356 FWL
 SECTION 19 T9S R21 E
 LAT: 40° 1' 39.029 N
 LONG: 109° 35' 59.960 W



Weatherford®



WELL DETAILS: NBU 921-19D2DS						
+N/-S	+E/-W	Northing	Ground Level: Easting	4789.00 2032350.83	Latitude 40° 1' 39.029 N	Longitude 109° 35' 59.960 W
0.00	0.00	14539141.03				Slot

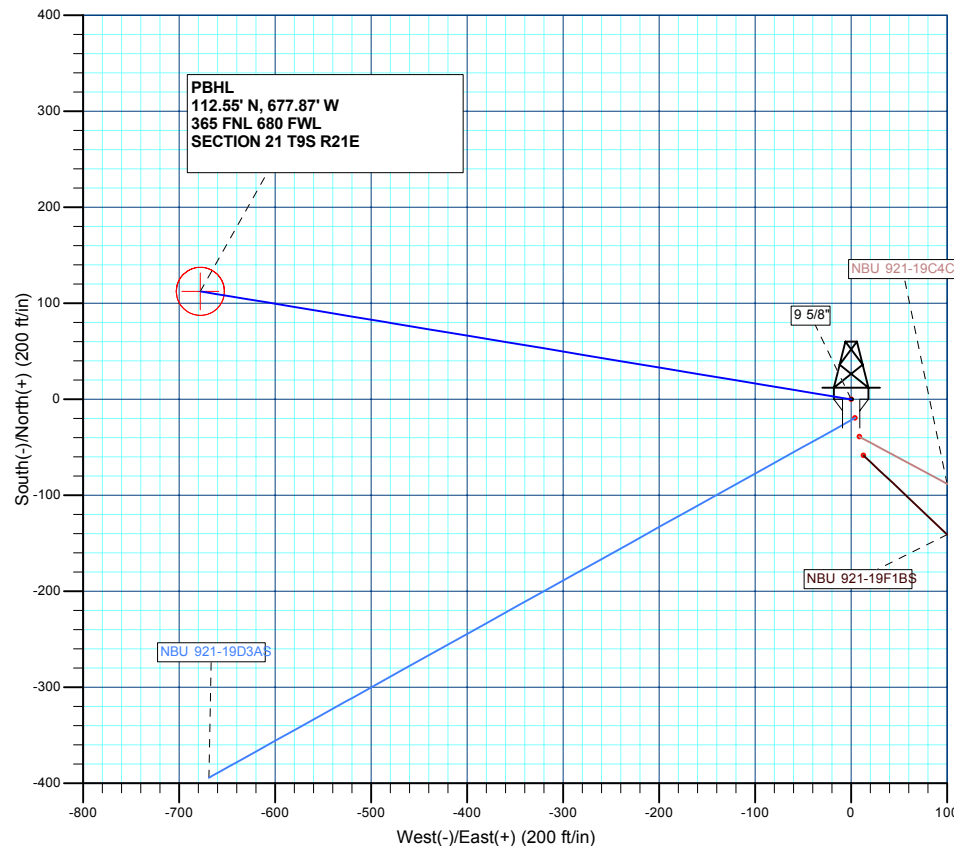
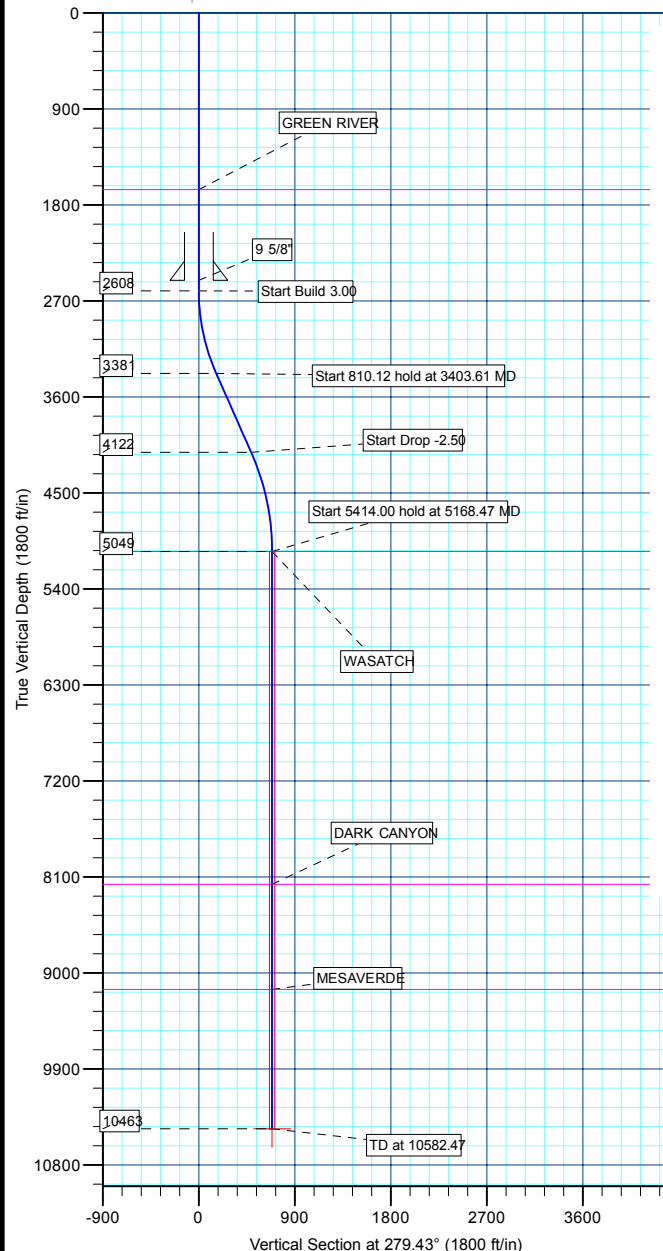
WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	10463.00	112.55	-677.87	40° 1' 40.141 N	109° 36' 8.676 W	Circle (Radius: 25.00)

SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2608.00	0.00	0.00	2608.00	0.00	0.00	0.00	0.00	0.00		
3403.61	23.87	279.43	3380.80	26.75	-161.13	3.00	279.43	163.34		
4213.74	23.87	279.43	4121.64	80.44	-484.51	0.00	0.00	491.14		
5168.47	0.00	0.00	5049.00	112.55	-677.87	2.50	180.00	687.15		
10582.47	0.00	0.00	10463.00	112.55	-677.87	0.00	0.00	687.15		PBHL_NBU 921-19D2DS(365 FNL 680 FWL)25' TGT RAD

CASING DETAILS			
TVD	MD	Name	Size
2508.00	2508.00	9 5/8"	9.62



KB ELEV: WELL @ 4803.00ft (Original Well Elev)
 GRD ELEV: 4789.00



Plan: PLAN #1 11-16-09 RHS (NBU 921-19D2DS/NBU 921-19D2DS)

Created By: Robert H. Scott 14:32, November 16 2009



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	NBU 921-19D PAD	North Reference:	True
Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 921-19D2DS		
Design:	PLAN #1 11-16-09 RHS		

Project	UINTAH COUNTY, UTAH (nad 27),		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 921-19D PAD, SECTION 19 T9S R21 E			
Site Position:		Northing:	14,539,141.03 ft	Latitude: 40° 1' 39.029 N
From:	Lat/Long	Easting:	2,032,350.83 ft	Longitude: 109° 35' 59.960 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence: 0.90 °

Well	NBU 921-19D2DS			
Well Position	+N/-S	0.00 ft	Northing:	14,539,141.03 ft
	+E/-W	0.00 ft	Easting:	2,032,350.83 ft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
			Ground Level:	4,789.00 ft

Wellbore	NBU 921-19D2DS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	11/16/2009	11.35	65.93	52,498

Design	PLAN #1 11-16-09 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	279.43

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,608.00	0.00	0.00	2,608.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,403.61	23.87	279.43	3,380.80	26.75	-161.13	3.00	3.00	0.00	279.43	
4,213.74	23.87	279.43	4,121.64	80.44	-484.51	0.00	0.00	0.00	0.00	
5,168.47	0.00	0.00	5,049.00	112.55	-677.87	2.50	-2.50	0.00	180.00	
10,582.47	0.00	0.00	10,463.00	112.55	-677.87	0.00	0.00	0.00	0.00	PBHL_NBU 921-19



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	NBU 921-19D PAD	North Reference:	True
Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 921-19D2DS		
Design:	PLAN #1 11-16-09 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start Build 3.00									
2,608.00	0.00	0.00	2,608.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	2.76	279.43	2,699.96	0.36	-2.19	2.22	3.00	3.00	0.00
2,800.00	5.76	279.43	2,799.68	1.58	-9.51	9.64	3.00	3.00	0.00
2,900.00	8.76	279.43	2,898.86	3.65	-21.98	22.28	3.00	3.00	0.00
3,000.00	11.76	279.43	2,997.25	6.57	-39.55	40.09	3.00	3.00	0.00
3,100.00	14.76	279.43	3,094.58	10.32	-62.17	63.02	3.00	3.00	0.00
3,200.00	17.76	279.43	3,190.57	14.91	-89.79	91.02	3.00	3.00	0.00
3,300.00	20.76	279.43	3,284.96	20.31	-122.33	124.00	3.00	3.00	0.00
3,400.00	23.76	279.43	3,377.49	26.51	-159.69	161.88	3.00	3.00	0.00
Start 810.12 hold at 3403.61 MD									
3,403.61	23.87	279.43	3,380.80	26.75	-161.13	163.34	3.00	3.00	0.00
3,500.00	23.87	279.43	3,468.94	33.14	-199.61	202.34	0.00	0.00	0.00
3,600.00	23.87	279.43	3,560.39	39.77	-239.52	242.80	0.00	0.00	0.00
3,700.00	23.87	279.43	3,651.84	46.40	-279.44	283.27	0.00	0.00	0.00
3,800.00	23.87	279.43	3,743.29	53.02	-319.36	323.73	0.00	0.00	0.00
3,900.00	23.87	279.43	3,834.73	59.65	-359.27	364.19	0.00	0.00	0.00
4,000.00	23.87	279.43	3,926.18	66.28	-399.19	404.66	0.00	0.00	0.00
4,100.00	23.87	279.43	4,017.63	72.91	-439.11	445.12	0.00	0.00	0.00
4,200.00	23.87	279.43	4,109.08	79.53	-479.03	485.58	0.00	0.00	0.00
Start Drop -2.50									
4,213.74	23.87	279.43	4,121.64	80.44	-484.51	491.14	0.00	0.00	0.00
4,300.00	21.71	279.43	4,201.16	85.92	-517.47	524.55	2.50	-2.50	0.00
4,400.00	19.21	279.43	4,294.85	91.64	-551.95	559.51	2.50	-2.50	0.00
4,500.00	16.71	279.43	4,389.97	96.69	-582.37	590.35	2.50	-2.50	0.00
4,600.00	14.21	279.43	4,486.34	101.06	-608.67	617.00	2.50	-2.50	0.00
4,700.00	11.71	279.43	4,583.78	104.73	-630.80	639.43	2.50	-2.50	0.00
4,800.00	9.21	279.43	4,682.11	107.71	-648.71	657.59	2.50	-2.50	0.00
4,900.00	6.71	279.43	4,781.14	109.98	-662.37	671.44	2.50	-2.50	0.00
5,000.00	4.21	279.43	4,880.68	111.53	-671.76	680.96	2.50	-2.50	0.00
5,100.00	1.71	279.43	4,980.54	112.38	-676.86	686.12	2.50	-2.50	0.00
Start 5414.00 hold at 5168.47 MD - WASATCH									
5,168.47	0.00	0.00	5,049.00	112.55	-677.87	687.15	2.50	-2.50	0.00
5,200.00	0.00	0.00	5,080.53	112.55	-677.87	687.15	0.00	0.00	0.00
5,300.00	0.00	0.00	5,180.53	112.55	-677.87	687.15	0.00	0.00	0.00
5,400.00	0.00	0.00	5,280.53	112.55	-677.87	687.15	0.00	0.00	0.00
5,500.00	0.00	0.00	5,380.53	112.55	-677.87	687.15	0.00	0.00	0.00
5,600.00	0.00	0.00	5,480.53	112.55	-677.87	687.15	0.00	0.00	0.00
5,700.00	0.00	0.00	5,580.53	112.55	-677.87	687.15	0.00	0.00	0.00
5,800.00	0.00	0.00	5,680.53	112.55	-677.87	687.15	0.00	0.00	0.00
5,900.00	0.00	0.00	5,780.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,000.00	0.00	0.00	5,880.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,100.00	0.00	0.00	5,980.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,200.00	0.00	0.00	6,080.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,300.00	0.00	0.00	6,180.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,400.00	0.00	0.00	6,280.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,500.00	0.00	0.00	6,380.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,600.00	0.00	0.00	6,480.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,700.00	0.00	0.00	6,580.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,800.00	0.00	0.00	6,680.53	112.55	-677.87	687.15	0.00	0.00	0.00
6,900.00	0.00	0.00	6,780.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,000.00	0.00	0.00	6,880.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,100.00	0.00	0.00	6,980.53	112.55	-677.87	687.15	0.00	0.00	0.00



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Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	NBU 921-19D PAD	North Reference:	True
Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 921-19D2DS		
Design:	PLAN #1 11-16-09 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,200.00	0.00	0.00	7,080.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,300.00	0.00	0.00	7,180.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,400.00	0.00	0.00	7,280.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,500.00	0.00	0.00	7,380.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,600.00	0.00	0.00	7,480.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,700.00	0.00	0.00	7,580.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,800.00	0.00	0.00	7,680.53	112.55	-677.87	687.15	0.00	0.00	0.00
7,900.00	0.00	0.00	7,780.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,000.00	0.00	0.00	7,880.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,100.00	0.00	0.00	7,980.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,200.00	0.00	0.00	8,080.53	112.55	-677.87	687.15	0.00	0.00	0.00
DARK CANYON									
8,290.47	0.00	0.00	8,171.00	112.55	-677.87	687.15	0.00	0.00	0.00
8,300.00	0.00	0.00	8,180.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,400.00	0.00	0.00	8,280.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,500.00	0.00	0.00	8,380.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,600.00	0.00	0.00	8,480.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,700.00	0.00	0.00	8,580.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,800.00	0.00	0.00	8,680.53	112.55	-677.87	687.15	0.00	0.00	0.00
8,900.00	0.00	0.00	8,780.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,000.00	0.00	0.00	8,880.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,100.00	0.00	0.00	8,980.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,200.00	0.00	0.00	9,080.53	112.55	-677.87	687.15	0.00	0.00	0.00
MESAVERDE									
9,274.47	0.00	0.00	9,155.00	112.55	-677.87	687.15	0.00	0.00	0.00
9,300.00	0.00	0.00	9,180.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,400.00	0.00	0.00	9,280.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,500.00	0.00	0.00	9,380.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,600.00	0.00	0.00	9,480.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,700.00	0.00	0.00	9,580.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,800.00	0.00	0.00	9,680.53	112.55	-677.87	687.15	0.00	0.00	0.00
9,900.00	0.00	0.00	9,780.53	112.55	-677.87	687.15	0.00	0.00	0.00
10,000.00	0.00	0.00	9,880.53	112.55	-677.87	687.15	0.00	0.00	0.00
10,100.00	0.00	0.00	9,980.53	112.55	-677.87	687.15	0.00	0.00	0.00
10,200.00	0.00	0.00	10,080.53	112.55	-677.87	687.15	0.00	0.00	0.00
10,300.00	0.00	0.00	10,180.53	112.55	-677.87	687.15	0.00	0.00	0.00
10,400.00	0.00	0.00	10,280.53	112.55	-677.87	687.15	0.00	0.00	0.00
10,500.00	0.00	0.00	10,380.53	112.55	-677.87	687.15	0.00	0.00	0.00
PBHL_NBU 921-19D2DS(365 FNL 680 FWL)25' TGT RAD									
10,582.47	0.00	0.00	10,463.00	112.55	-677.87	687.15	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_NBU 921-19D2DS	0.00	0.00	10,463.00	112.55	-677.87	14,539,242.91	2,031,671.28	40° 1' 40.141 N	109° 36' 8.676 W
- plan hits target center									
- Circle (radius 25.00)									



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Project:	UINTAH COUNTY, UTAH (nad 27)	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site:	NBU 921-19D PAD	North Reference:	True
Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Wellbore:	NBU 921-19D2DS		
Design:	PLAN #1 11-16-09 RHS		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,508.00	2,508.00	9 5/8"	9.62	12.25	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,656.00	1,656.00	GREEN RIVER			
5,168.47	5,049.00	WASATCH			
8,290.47	8,171.00	DARK CANYON			
9,274.47	9,155.00	MESAVERDE			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,608.00	2,608.00	0.00	0.00	Start Build 3.00	
3,403.61	3,380.80	26.75	-161.13	Start 810.12 hold at 3403.61 MD	
4,213.74	4,121.64	80.44	-484.51	Start Drop -2.50	
5,168.47	5,049.00	112.55	-677.87	Start 5414.00 hold at 5168.47 MD	
10,582.47	10,463.00	112.55	-677.87	TD at 10582.47	



ANADARKO PETROLEUM CORP.

**UINTAH COUNTY, UTAH (nad 27)
NBU 921-19D PAD
NBU 921-19D2DS**

**NBU 921-19D2DS
PLAN #1 11-16-09 RHS**

Anticollision Report

16 November, 2009





Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Reference PLAN #1 11-16-09 RHS

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	0.00 to 20,000.00ft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program Date 11/16/2009

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	10,582.47	PLAN #1 11-16-09 RHS (NBU 921-19D2D	MWD	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
NBU 921-19D PAD						
NBU 921-19C4CS - NBU 921-19C4CS - PLAN #1 11-16-	2,561.74	2,561.74	39.92	28.66	3.546	CC
NBU 921-19C4CS - NBU 921-19C4CS - PLAN #1 11-16-	2,608.00	2,607.68	40.02	28.56	3.492	ES, SF
NBU 921-19D3AS - NBU 921-19D3AS - PLAN #1 11-16-	2,566.66	2,566.66	19.75	8.47	1.751	CC
NBU 921-19D3AS - NBU 921-19D3AS - PLAN #1 11-16-	2,608.00	2,607.96	19.77	8.31	1.725	ES, SF
NBU 921-19F1BS - NBU 921-19F1BS - PLAN #1 11-16-(300.00	300.00	59.68	58.59	54.632	CC, ES
NBU 921-19F1BS - NBU 921-19F1BS - PLAN #1 11-16-(700.00	684.63	95.85	92.88	32.264	SF

Offset Design NBU 921-19D PAD - NBU 921-19C4CS - NBU 921-19C4CS - PLAN #1 11-16-09 RHS													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	167.44	-38.97	8.68	39.92					
100.00	100.00	100.00	100.00	0.10	0.10	167.44	-38.97	8.68	39.92	39.73	0.19	206.542		
200.00	200.00	200.00	200.00	0.32	0.32	167.44	-38.97	8.68	39.92	39.28	0.64	62.107		
300.00	300.00	300.00	300.00	0.55	0.55	167.44	-38.97	8.68	39.92	38.83	1.09	36.549		
400.00	400.00	400.00	400.00	0.77	0.77	167.44	-38.97	8.68	39.92	38.38	1.54	25.893		
500.00	500.00	500.00	500.00	1.00	1.00	167.44	-38.97	8.68	39.92	37.93	1.99	20.048		
600.00	600.00	600.00	600.00	1.22	1.22	167.44	-38.97	8.68	39.92	37.48	2.44	16.356		
700.00	700.00	700.00	700.00	1.45	1.45	167.44	-38.97	8.68	39.92	37.03	2.89	13.812		
800.00	800.00	800.00	800.00	1.67	1.67	167.44	-38.97	8.68	39.92	36.58	3.34	11.953		
900.00	900.00	900.00	900.00	1.89	1.89	167.44	-38.97	8.68	39.92	36.13	3.79	10.535		
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	167.44	-38.97	8.68	39.92	35.69	4.24	9.418		
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	167.44	-38.97	8.68	39.92	35.24	4.69	8.515		
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	167.44	-38.97	8.68	39.92	34.79	5.14	7.770		
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	167.44	-38.97	8.68	39.92	34.34	5.59	7.145		
1,400.00	1,400.00	1,400.00	1,400.00	3.02	3.02	167.44	-38.97	8.68	39.92	33.89	6.04	6.613		
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	167.44	-38.97	8.68	39.92	33.44	6.49	6.155		
1,600.00	1,600.00	1,600.00	1,600.00	3.47	3.47	167.44	-38.97	8.68	39.92	32.99	6.94	5.756		
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	167.44	-38.97	8.68	39.92	32.54	7.39	5.406		
1,800.00	1,800.00	1,800.00	1,800.00	3.92	3.92	167.44	-38.97	8.68	39.92	32.09	7.84	5.095		
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	167.44	-38.97	8.68	39.92	31.64	8.28	4.819		
2,000.00	2,000.00	2,000.00	2,000.00	4.37	4.37	167.44	-38.97	8.68	39.92	31.19	8.73	4.571		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 921-19D PAD - NBU 921-19C4CS - NBU 921-19C4CS - PLAN #1 11-16-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	167.44	-38.97	8.68	39.92	30.74	9.18	4.347	
2,200.00	2,200.00	2,200.00	2,200.00	4.82	4.82	167.44	-38.97	8.68	39.92	30.29	9.63	4.144	
2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	167.44	-38.97	8.68	39.92	29.84	10.08	3.960	
2,400.00	2,400.00	2,400.00	2,400.00	5.27	5.27	167.44	-38.97	8.68	39.92	29.39	10.53	3.791	
2,500.00	2,500.00	2,500.00	2,500.00	5.49	5.49	167.44	-38.97	8.68	39.92	28.94	10.98	3.635	
2,561.74	2,561.74	2,561.74	2,561.74	5.63	5.63	167.44	-38.97	8.68	39.92	28.66	11.26	3.546 CC	
2,608.00	2,608.00	2,607.68	2,607.67	5.73	5.73	167.28	-39.04	8.81	40.02	28.56	11.46	3.492 ES, SF	
2,700.00	2,699.96	2,698.14	2,698.07	5.93	5.89	-118.01	-40.58	11.68	43.27	31.45	11.82	3.660	
2,800.00	2,799.68	2,794.91	2,794.48	6.14	6.08	-130.56	-44.47	18.93	54.38	42.18	12.20	4.458	
2,900.00	2,898.86	2,888.66	2,887.37	6.36	6.27	-142.16	-50.44	30.04	75.92	63.38	12.54	6.054	
3,000.00	2,997.25	2,978.15	2,975.36	6.60	6.48	-150.06	-58.14	44.39	108.22	95.37	12.84	8.426	
3,100.00	3,094.58	3,062.38	3,057.39	6.88	6.70	-154.98	-67.17	61.19	150.35	137.24	13.11	11.469	
3,200.00	3,190.57	3,140.59	3,132.74	7.20	6.93	-158.00	-77.07	79.63	201.26	187.92	13.34	15.088	
3,300.00	3,284.96	3,212.29	3,201.02	7.59	7.18	-159.84	-87.42	98.91	259.99	246.46	13.54	19.206	
3,403.61	3,380.80	3,284.41	3,268.92	8.08	7.46	-161.10	-98.92	120.32	327.91	314.19	13.72	23.894	
3,500.00	3,468.94	3,354.62	3,334.89	8.62	7.77	-162.70	-110.28	141.47	393.54	379.46	14.08	27.953	
3,600.00	3,560.39	3,427.45	3,403.34	9.22	8.10	-163.89	-122.06	163.42	461.75	447.29	14.46	31.926	
3,700.00	3,651.84	3,500.29	3,471.78	9.86	8.46	-164.77	-133.85	185.36	530.05	515.18	14.86	35.666	
3,800.00	3,743.29	3,573.12	3,540.23	10.54	8.83	-165.45	-145.63	207.31	598.39	583.11	15.28	39.166	
3,900.00	3,834.73	3,645.96	3,608.67	11.24	9.22	-165.99	-157.42	229.25	666.77	651.07	15.71	42.454	
4,000.00	3,926.18	3,718.79	3,677.11	11.97	9.63	-166.43	-169.20	251.19	735.18	719.04	16.14	45.542	
4,100.00	4,017.63	3,791.63	3,745.56	12.71	10.04	-166.80	-180.98	273.14	803.61	787.02	16.59	48.439	
4,200.00	4,109.08	3,864.46	3,814.00	13.47	10.47	-167.11	-192.77	295.08	872.05	855.00	17.05	51.153	
4,213.74	4,121.64	3,874.47	3,823.40	13.58	10.53	-167.15	-194.39	298.10	881.45	864.34	17.11	51.513	
4,300.00	4,201.16	3,938.38	3,883.46	14.15	10.91	-167.77	-204.73	317.35	939.33	921.67	17.66	53.180	
4,400.00	4,294.85	4,015.10	3,955.55	14.71	11.37	-168.34	-217.14	340.47	1,003.44	985.16	18.28	54.900	
4,500.00	4,389.97	4,094.50	4,030.17	15.21	11.86	-168.77	-229.99	364.39	1,064.21	1,045.33	18.88	56.363	
4,600.00	4,486.34	4,176.44	4,107.16	15.67	12.38	-169.11	-243.24	389.08	1,121.53	1,102.05	19.47	57.599	
4,700.00	4,583.78	4,260.74	4,186.39	16.07	12.92	-169.35	-256.88	414.48	1,175.28	1,155.24	20.04	58.640	
4,800.00	4,682.11	4,347.27	4,267.69	16.41	13.48	-169.53	-270.88	440.55	1,225.38	1,204.79	20.59	59.512	
4,900.00	4,781.14	4,435.84	4,350.93	16.70	14.05	-169.64	-285.21	467.23	1,271.72	1,250.60	21.11	60.231	
5,000.00	4,880.68	4,526.30	4,435.93	16.93	14.65	-169.70	-299.85	494.49	1,314.22	1,292.61	21.61	60.817	
5,100.00	4,980.54	4,618.46	4,522.54	17.11	15.26	-169.71	-314.76	522.25	1,352.81	1,330.73	22.08	61.281	
5,168.47	5,049.00	4,682.47	4,582.68	17.20	15.69	109.74	-325.11	541.54	1,376.93	1,354.56	22.37	61.544	
5,200.00	5,080.53	4,712.09	4,610.52	17.24	15.89	109.81	-329.91	550.46	1,387.61	1,365.10	22.51	61.631	
5,300.00	5,180.53	4,806.06	4,698.83	17.38	16.52	110.01	-345.11	578.78	1,421.49	1,398.51	22.98	61.854	
5,400.00	5,280.53	4,900.03	4,787.13	17.53	17.16	110.20	-360.32	607.09	1,455.39	1,431.94	23.45	62.064	
5,500.00	5,380.53	4,994.00	4,875.44	17.67	17.80	110.39	-375.52	635.40	1,489.29	1,465.37	23.92	62.260	
5,600.00	5,480.53	5,087.97	4,963.74	17.82	18.44	110.56	-390.72	663.71	1,523.22	1,498.82	24.39	62.444	
5,700.00	5,580.53	5,181.95	5,052.05	17.97	19.09	110.73	-405.93	692.03	1,557.15	1,532.28	24.87	62.618	
5,800.00	5,680.53	5,275.92	5,140.35	18.12	19.74	110.89	-421.13	720.34	1,591.09	1,565.75	25.34	62.781	
5,900.00	5,780.53	5,369.89	5,228.66	18.27	20.39	111.05	-436.33	748.65	1,625.05	1,599.23	25.82	62.935	
6,000.00	5,880.53	5,463.86	5,316.96	18.42	21.05	111.19	-451.54	776.96	1,659.01	1,632.71	26.30	63.081	
6,100.00	5,980.53	5,557.83	5,405.26	18.58	21.70	111.33	-466.74	805.27	1,692.99	1,666.21	26.78	63.218	
6,200.00	6,080.53	5,651.80	5,493.57	18.73	22.36	111.47	-481.95	833.59	1,726.97	1,699.71	27.26	63.347	
6,300.00	6,180.53	5,745.77	5,581.87	18.89	23.02	111.60	-497.15	861.90	1,760.96	1,733.22	27.75	63.470	
6,400.00	6,280.53	5,839.74	5,670.18	19.05	23.68	111.73	-512.35	890.21	1,794.96	1,766.73	28.23	63.585	
6,500.00	6,380.53	5,933.71	5,758.48	19.21	24.34	111.85	-527.56	918.52	1,828.97	1,800.26	28.71	63.695	
6,600.00	6,480.53	6,027.68	5,846.79	19.37	25.00	111.97	-542.76	946.84	1,862.98	1,833.78	29.20	63.798	
6,700.00	6,580.53	6,121.65	5,935.09	19.53	25.67	112.08	-557.96	975.15	1,897.01	1,867.32	29.69	63.896	
6,800.00	6,680.53	6,321.91	6,124.70	19.69	26.32	112.29	-588.40	1,031.83	1,929.59	1,899.14	30.45	63.964	
6,900.00	6,780.53	6,620.27	6,414.26	19.86	28.06	112.51	-622.16	1,094.69	1,953.44	1,922.03	31.40	62.202	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
7,000.00	6,880.53	6,930.99	6,722.00	20.02	28.90	112.64	-641.98	1,131.60	1,966.88	1,934.60	32.28	60.923	
7,100.00	6,980.53	7,189.78	6,980.53	20.19	29.27	112.66	-646.43	1,139.89	1,969.85	1,936.88	32.96	59.759	
7,200.00	7,080.53	7,289.78	7,080.53	20.36	29.38	112.66	-646.43	1,139.89	1,969.85	1,936.50	33.35	59.068	
7,300.00	7,180.53	7,389.78	7,180.53	20.53	29.50	112.66	-646.43	1,139.89	1,969.85	1,936.11	33.74	58.389	
7,400.00	7,280.53	7,489.78	7,280.53	20.70	29.61	112.66	-646.43	1,139.89	1,969.85	1,935.72	34.13	57.724	
7,500.00	7,380.53	7,589.78	7,380.53	20.87	29.72	112.66	-646.43	1,139.89	1,969.85	1,935.33	34.52	57.070	
7,600.00	7,480.53	7,689.78	7,480.53	21.04	29.84	112.66	-646.43	1,139.89	1,969.85	1,934.94	34.91	56.430	
7,700.00	7,580.53	7,789.78	7,580.53	21.22	29.96	112.66	-646.43	1,139.89	1,969.85	1,934.54	35.30	55.801	
7,800.00	7,680.53	7,889.78	7,680.53	21.39	30.07	112.66	-646.43	1,139.89	1,969.85	1,934.15	35.70	55.184	
7,900.00	7,780.53	7,989.78	7,780.53	21.57	30.19	112.66	-646.43	1,139.89	1,969.85	1,933.75	36.09	54.579	
8,000.00	7,880.53	8,089.78	7,880.53	21.74	30.31	112.66	-646.43	1,139.89	1,969.85	1,933.36	36.49	53.985	
8,100.00	7,980.53	8,189.78	7,980.53	21.92	30.43	112.66	-646.43	1,139.89	1,969.85	1,932.96	36.89	53.402	
8,200.00	8,080.53	8,289.78	8,080.53	22.10	30.56	112.66	-646.43	1,139.89	1,969.85	1,932.56	37.29	52.830	
8,300.00	8,180.53	8,389.78	8,180.53	22.28	30.68	112.66	-646.43	1,139.89	1,969.85	1,932.16	37.69	52.269	
8,400.00	8,280.53	8,489.78	8,280.53	22.46	30.81	112.66	-646.43	1,139.89	1,969.85	1,931.76	38.09	51.718	
8,500.00	8,380.53	8,589.78	8,380.53	22.64	30.93	112.66	-646.43	1,139.89	1,969.85	1,931.36	38.49	51.177	
8,600.00	8,480.53	8,689.78	8,480.53	22.82	31.06	112.66	-646.43	1,139.89	1,969.85	1,930.95	38.89	50.646	
8,700.00	8,580.53	8,789.78	8,580.53	23.00	31.19	112.66	-646.43	1,139.89	1,969.85	1,930.55	39.30	50.125	
8,800.00	8,680.53	8,889.78	8,680.53	23.18	31.32	112.66	-646.43	1,139.89	1,969.85	1,930.14	39.70	49.613	
8,900.00	8,780.53	8,989.78	8,780.53	23.37	31.45	112.66	-646.43	1,139.89	1,969.85	1,929.74	40.11	49.110	
9,000.00	8,880.53	9,089.78	8,880.53	23.55	31.58	112.66	-646.43	1,139.89	1,969.85	1,929.33	40.52	48.617	
9,100.00	8,980.53	9,189.78	8,980.53	23.73	31.71	112.66	-646.43	1,139.89	1,969.85	1,928.92	40.93	48.132	
9,200.00	9,080.53	9,289.78	9,080.53	23.92	31.85	112.66	-646.43	1,139.89	1,969.85	1,928.51	41.34	47.656	
9,300.00	9,180.53	9,389.78	9,180.53	24.11	31.98	112.66	-646.43	1,139.89	1,969.85	1,928.10	41.74	47.188	
9,400.00	9,280.53	9,489.78	9,280.53	24.29	32.12	112.66	-646.43	1,139.89	1,969.85	1,927.69	42.16	46.728	
9,500.00	9,380.53	9,589.78	9,380.53	24.48	32.26	112.66	-646.43	1,139.89	1,969.85	1,927.28	42.57	46.276	
9,600.00	9,480.53	9,689.78	9,480.53	24.67	32.39	112.66	-646.43	1,139.89	1,969.85	1,926.87	42.98	45.833	
9,700.00	9,580.53	9,789.78	9,580.53	24.86	32.53	112.66	-646.43	1,139.89	1,969.85	1,926.45	43.39	45.397	
9,800.00	9,680.53	9,889.78	9,680.53	25.05	32.67	112.66	-646.43	1,139.89	1,969.85	1,926.04	43.81	44.968	
9,900.00	9,780.53	9,989.78	9,780.53	25.24	32.81	112.66	-646.43	1,139.89	1,969.85	1,925.63	44.22	44.547	
10,000.00	9,880.53	10,089.78	9,880.53	25.43	32.95	112.66	-646.43	1,139.89	1,969.85	1,925.21	44.63	44.133	
10,100.00	9,980.53	10,189.78	9,980.53	25.62	33.10	112.66	-646.43	1,139.89	1,969.85	1,924.80	45.05	43.726	
10,200.00	10,080.53	10,289.78	10,080.53	25.81	33.24	112.66	-646.43	1,139.89	1,969.85	1,924.38	45.47	43.325	
10,300.00	10,180.53	10,389.78	10,180.53	26.00	33.38	112.66	-646.43	1,139.89	1,969.85	1,923.96	45.88	42.932	
10,400.00	10,280.53	10,489.78	10,280.53	26.19	33.53	112.66	-646.43	1,139.89	1,969.85	1,923.55	46.30	42.545	
10,463.16	10,343.68	10,552.93	10,343.68	26.32	33.62	112.66	-646.43	1,139.89	1,969.85	1,923.28	46.56	42.304	
10,500.00	10,380.53	10,580.25	10,371.00	26.39	33.66	112.66	-646.43	1,139.89	1,969.87	1,923.17	46.70	42.182	
10,582.47	10,463.00	10,580.25	10,371.00	26.55	33.66	112.66	-646.43	1,139.89	1,971.99	1,925.11	46.88	42.066	



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 921-19D PAD - NBU 921-19D3AS - NBU 921-19D3AS - PLAN #1 11-16-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	167.72	-19.30	4.20	19.75				
100.00	100.00	100.00	100.00	0.10	0.10	167.72	-19.30	4.20	19.75	19.56	0.19	102.195	
200.00	200.00	200.00	200.00	0.32	0.32	167.72	-19.30	4.20	19.75	19.11	0.64	30.730	
300.00	300.00	300.00	300.00	0.55	0.55	167.72	-19.30	4.20	19.75	18.66	1.09	18.084	
400.00	400.00	400.00	400.00	0.77	0.77	167.72	-19.30	4.20	19.75	18.21	1.54	12.812	
500.00	500.00	500.00	500.00	1.00	1.00	167.72	-19.30	4.20	19.75	17.76	1.99	9.920	
600.00	600.00	600.00	600.00	1.22	1.22	167.72	-19.30	4.20	19.75	17.31	2.44	8.093	
700.00	700.00	700.00	700.00	1.45	1.45	167.72	-19.30	4.20	19.75	16.86	2.89	6.834	
800.00	800.00	800.00	800.00	1.67	1.67	167.72	-19.30	4.20	19.75	16.41	3.34	5.914	
900.00	900.00	900.00	900.00	1.89	1.89	167.72	-19.30	4.20	19.75	15.96	3.79	5.213	
1,000.00	1,000.00	1,000.00	1,000.00	2.12	2.12	167.72	-19.30	4.20	19.75	15.52	4.24	4.660	
1,100.00	1,100.00	1,100.00	1,100.00	2.34	2.34	167.72	-19.30	4.20	19.75	15.07	4.69	4.213	
1,200.00	1,200.00	1,200.00	1,200.00	2.57	2.57	167.72	-19.30	4.20	19.75	14.62	5.14	3.845	
1,300.00	1,300.00	1,300.00	1,300.00	2.79	2.79	167.72	-19.30	4.20	19.75	14.17	5.59	3.535	
1,400.00	1,400.00	1,400.00	1,400.00	3.02	3.02	167.72	-19.30	4.20	19.75	13.72	6.04	3.272	
1,500.00	1,500.00	1,500.00	1,500.00	3.24	3.24	167.72	-19.30	4.20	19.75	13.27	6.49	3.045	
1,600.00	1,600.00	1,600.00	1,600.00	3.47	3.47	167.72	-19.30	4.20	19.75	12.82	6.94	2.848	
1,700.00	1,700.00	1,700.00	1,700.00	3.69	3.69	167.72	-19.30	4.20	19.75	12.37	7.39	2.675	
1,800.00	1,800.00	1,800.00	1,800.00	3.92	3.92	167.72	-19.30	4.20	19.75	11.92	7.84	2.521	
1,900.00	1,900.00	1,900.00	1,900.00	4.14	4.14	167.72	-19.30	4.20	19.75	11.47	8.28	2.384	
2,000.00	2,000.00	2,000.00	2,000.00	4.37	4.37	167.72	-19.30	4.20	19.75	11.02	8.73	2.262	
2,100.00	2,100.00	2,100.00	2,100.00	4.59	4.59	167.72	-19.30	4.20	19.75	10.57	9.18	2.151	
2,200.00	2,200.00	2,200.00	2,200.00	4.82	4.82	167.72	-19.30	4.20	19.75	10.12	9.63	2.051	
2,300.00	2,300.00	2,300.00	2,300.00	5.04	5.04	167.72	-19.30	4.20	19.75	9.67	10.08	1.959	
2,400.00	2,400.00	2,400.00	2,400.00	5.27	5.27	167.72	-19.30	4.20	19.75	9.22	10.53	1.876	
2,500.00	2,500.00	2,500.00	2,500.00	5.49	5.49	167.72	-19.30	4.20	19.75	8.77	10.98	1.799	
2,566.66	2,566.66	2,566.66	2,566.66	5.64	5.64	167.72	-19.30	4.20	19.75	8.47	11.28	1.751 CC	
2,608.00	2,608.00	2,607.96	2,607.96	5.73	5.73	167.87	-19.33	4.16	19.77	8.31	11.46	1.725 ES, SF	
2,700.00	2,699.96	2,699.64	2,699.58	5.93	5.90	-109.66	-20.72	1.65	21.44	9.61	11.83	1.812	
2,800.00	2,799.68	2,799.08	2,798.69	6.14	6.09	-108.02	-24.65	-5.41	26.57	14.35	12.22	2.174	
2,900.00	2,898.86	2,898.15	2,896.86	6.36	6.29	-107.06	-31.06	-16.91	35.13	22.49	12.64	2.780	
3,000.00	2,997.25	2,996.67	2,993.69	6.60	6.51	-106.55	-39.87	-32.75	47.07	33.98	13.09	3.595	
3,100.00	3,094.58	3,094.49	3,088.78	6.88	6.77	-106.27	-51.02	-52.77	62.33	48.72	13.61	4.581	
3,200.00	3,190.57	3,191.46	3,181.76	7.20	7.07	-106.06	-64.39	-76.79	80.84	66.64	14.20	5.692	
3,300.00	3,284.96	3,287.96	3,272.86	7.59	7.43	-105.95	-79.87	-104.59	102.46	87.55	14.91	6.873	
3,403.61	3,380.80	3,388.55	3,367.38	8.08	7.86	-107.47	-96.61	-134.65	126.88	111.13	15.75	8.057	
3,500.00	3,468.94	3,481.81	3,455.02	8.62	8.29	-109.86	-112.12	-162.52	150.57	133.93	16.63	9.052	
3,600.00	3,560.39	3,578.57	3,545.94	9.22	8.78	-111.66	-128.22	-191.44	175.33	157.71	17.62	9.949	
3,700.00	3,651.84	3,675.33	3,636.86	9.86	9.28	-113.02	-144.32	-220.35	200.22	181.54	18.68	10.721	
3,800.00	3,743.29	3,772.09	3,727.79	10.54	9.82	-114.07	-160.42	-249.27	225.19	205.41	19.78	11.386	
3,900.00	3,834.73	3,868.85	3,818.71	11.24	10.37	-114.91	-176.52	-278.19	250.22	229.29	20.92	11.959	
4,000.00	3,926.18	3,965.60	3,909.63	11.97	10.93	-115.60	-192.62	-307.10	275.28	253.18	22.10	12.455	
4,100.00	4,017.63	4,062.36	4,000.55	12.71	11.51	-116.18	-208.71	-336.02	300.38	277.07	23.31	12.886	
4,200.00	4,109.08	4,159.12	4,091.48	13.47	12.11	-116.67	-224.81	-364.93	325.51	300.96	24.55	13.261	
4,213.74	4,121.64	4,172.41	4,103.97	13.58	12.19	-116.73	-227.02	-368.90	328.96	304.24	24.72	13.309	
4,300.00	4,201.16	4,256.08	4,182.59	14.15	12.71	-117.32	-240.95	-393.91	349.93	324.17	25.76	13.583	
4,400.00	4,294.85	4,353.47	4,274.10	14.71	13.33	-117.38	-257.15	-423.01	372.44	345.53	26.91	13.841	
4,500.00	4,389.97	4,451.10	4,365.84	15.21	13.95	-116.86	-273.39	-452.19	393.06	365.01	28.05	14.015	
4,600.00	4,486.34	4,548.79	4,457.64	15.67	14.58	-115.86	-289.65	-481.38	411.92	382.76	29.16	14.127	
4,700.00	4,583.78	4,646.36	4,549.33	16.07	15.22	-114.43	-305.88	-510.54	429.24	399.02	30.23	14.200	
4,800.00	4,682.11	4,746.79	4,644.04	16.41	15.78	-112.65	-322.13	-539.73	445.07	413.91	31.16	14.282	
4,900.00	4,781.14	4,849.15	4,741.67	16.70	16.27	-110.85	-337.07	-566.57	458.90	426.95	31.95	14.362	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 921-19D PAD - NBU 921-19D3AS - NBU 921-19D3AS - PLAN #1 11-16-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,880.68	4,952.47	4,841.27	16.93	16.72	-109.01	-350.43	-590.56	470.70	438.06	32.64	14.422	
5,100.00	4,980.54	5,056.70	4,942.68	17.11	17.14	-107.13	-362.12	-611.55	480.46	447.25	33.21	14.467	
5,168.47	5,049.00	5,128.55	5,013.08	17.20	17.41	173.64	-369.13	-624.15	485.99	452.46	33.54	14.492	
5,200.00	5,080.53	5,161.80	5,045.76	17.24	17.52	174.30	-372.08	-629.45	488.28	454.61	33.67	14.502	
5,300.00	5,180.53	5,268.13	5,150.74	17.38	17.86	176.09	-380.28	-644.18	494.88	460.79	34.08	14.519	
5,400.00	5,280.53	5,375.59	5,257.39	17.53	18.15	177.45	-386.64	-655.60	500.22	465.76	34.46	14.516	
5,500.00	5,380.53	5,483.89	5,365.30	17.67	18.39	178.37	-391.08	-663.57	504.06	469.25	34.80	14.483	
5,600.00	5,480.53	5,592.72	5,474.02	17.82	18.59	178.88	-393.53	-667.98	506.22	471.09	35.13	14.411	
5,700.00	5,580.53	5,699.24	5,580.53	17.97	18.74	178.99	-394.05	-668.92	506.68	471.26	35.43	14.303	
5,800.00	5,680.53	5,799.24	5,680.53	18.12	18.88	178.99	-394.05	-668.92	506.68	470.96	35.72	14.183	
5,900.00	5,780.53	5,899.24	5,780.53	18.27	19.02	178.99	-394.05	-668.92	506.68	470.66	36.03	14.065	
6,000.00	5,880.53	5,999.24	5,880.53	18.42	19.16	178.99	-394.05	-668.92	506.68	470.35	36.33	13.947	
6,100.00	5,980.53	6,099.24	5,980.53	18.58	19.30	178.99	-394.05	-668.92	506.68	470.04	36.64	13.829	
6,200.00	6,080.53	6,199.24	6,080.53	18.73	19.45	178.99	-394.05	-668.92	506.68	469.73	36.95	13.713	
6,300.00	6,180.53	6,299.24	6,180.53	18.89	19.59	178.99	-394.05	-668.92	506.68	469.42	37.26	13.598	
6,400.00	6,280.53	6,399.24	6,280.53	19.05	19.74	178.99	-394.05	-668.92	506.68	469.10	37.58	13.483	
6,500.00	6,380.53	6,499.24	6,380.53	19.21	19.89	178.99	-394.05	-668.92	506.68	468.78	37.90	13.370	
6,600.00	6,480.53	6,599.24	6,480.53	19.37	20.04	178.99	-394.05	-668.92	506.68	468.46	38.22	13.257	
6,700.00	6,580.53	6,699.24	6,580.53	19.53	20.19	178.99	-394.05	-668.92	506.68	468.14	38.54	13.146	
6,800.00	6,680.53	6,799.24	6,680.53	19.69	20.35	178.99	-394.05	-668.92	506.68	467.81	38.87	13.035	
6,900.00	6,780.53	6,899.24	6,780.53	19.86	20.50	178.99	-394.05	-668.92	506.68	467.48	39.20	12.926	
7,000.00	6,880.53	6,999.24	6,880.53	20.02	20.66	178.99	-394.05	-668.92	506.68	467.15	39.53	12.817	
7,100.00	6,980.53	7,099.24	6,980.53	20.19	20.81	178.99	-394.05	-668.92	506.68	466.82	39.86	12.710	
7,200.00	7,080.53	7,199.24	7,080.53	20.36	20.97	178.99	-394.05	-668.92	506.68	466.48	40.20	12.604	
7,300.00	7,180.53	7,299.24	7,180.53	20.53	21.13	178.99	-394.05	-668.92	506.68	466.14	40.54	12.499	
7,400.00	7,280.53	7,399.24	7,280.53	20.70	21.29	178.99	-394.05	-668.92	506.68	465.80	40.88	12.395	
7,500.00	7,380.53	7,499.24	7,380.53	20.87	21.45	178.99	-394.05	-668.92	506.68	465.46	41.22	12.292	
7,600.00	7,480.53	7,599.24	7,480.53	21.04	21.62	178.99	-394.05	-668.92	506.68	465.12	41.57	12.190	
7,700.00	7,580.53	7,699.24	7,580.53	21.22	21.78	178.99	-394.05	-668.92	506.68	464.77	41.91	12.089	
7,800.00	7,680.53	7,799.24	7,680.53	21.39	21.95	178.99	-394.05	-668.92	506.68	464.42	42.26	11.989	
7,900.00	7,780.53	7,899.24	7,780.53	21.57	22.11	178.99	-394.05	-668.92	506.68	464.07	42.61	11.891	
8,000.00	7,880.53	7,999.24	7,880.53	21.74	22.28	178.99	-394.05	-668.92	506.68	463.72	42.96	11.793	
8,100.00	7,980.53	8,099.24	7,980.53	21.92	22.45	178.99	-394.05	-668.92	506.68	463.36	43.32	11.697	
8,200.00	8,080.53	8,199.24	8,080.53	22.10	22.62	178.99	-394.05	-668.92	506.68	463.01	43.67	11.602	
8,300.00	8,180.53	8,299.24	8,180.53	22.28	22.79	178.99	-394.05	-668.92	506.68	462.65	44.03	11.507	
8,400.00	8,280.53	8,399.24	8,280.53	22.46	22.96	178.99	-394.05	-668.92	506.68	462.29	44.39	11.414	
8,500.00	8,380.53	8,499.24	8,380.53	22.64	23.13	178.99	-394.05	-668.92	506.68	461.93	44.75	11.322	
8,600.00	8,480.53	8,599.24	8,480.53	22.82	23.30	178.99	-394.05	-668.92	506.68	461.57	45.11	11.231	
8,700.00	8,580.53	8,699.24	8,580.53	23.00	23.48	178.99	-394.05	-668.92	506.68	461.20	45.48	11.141	
8,800.00	8,680.53	8,799.24	8,680.53	23.18	23.65	178.99	-394.05	-668.92	506.68	460.84	45.84	11.053	
8,900.00	8,780.53	8,899.24	8,780.53	23.37	23.83	178.99	-394.05	-668.92	506.68	460.47	46.21	10.965	
9,000.00	8,880.53	8,999.24	8,880.53	23.55	24.00	178.99	-394.05	-668.92	506.68	460.10	46.58	10.878	
9,100.00	8,980.53	9,099.24	8,980.53	23.73	24.18	178.99	-394.05	-668.92	506.68	459.73	46.95	10.792	
9,200.00	9,080.53	9,199.24	9,080.53	23.92	24.36	178.99	-394.05	-668.92	506.68	459.36	47.32	10.708	
9,300.00	9,180.53	9,299.24	9,180.53	24.11	24.54	178.99	-394.05	-668.92	506.68	458.99	47.69	10.624	
9,400.00	9,280.53	9,399.24	9,280.53	24.29	24.72	178.99	-394.05	-668.92	506.68	458.62	48.07	10.542	
9,500.00	9,380.53	9,499.24	9,380.53	24.48	24.90	178.99	-394.05	-668.92	506.68	458.24	48.44	10.460	
9,600.00	9,480.53	9,599.24	9,480.53	24.67	25.08	178.99	-394.05	-668.92	506.68	457.86	48.82	10.379	
9,700.00	9,580.53	9,699.24	9,580.53	24.86	25.26	178.99	-394.05	-668.92	506.68	457.49	49.19	10.300	
9,800.00	9,680.53	9,799.24	9,680.53	25.05	25.44	178.99	-394.05	-668.92	506.68	457.11	49.57	10.221	
9,900.00	9,780.53	9,899.24	9,780.53	25.24	25.62	178.99	-394.05	-668.92	506.68	456.73	49.95	10.143	
10,000.00	9,880.53	9,999.24	9,880.53	25.43	25.81	178.99	-394.05	-668.92	506.68	456.35	50.33	10.066	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 921-19D PAD - NBU 921-19D3AS - NBU 921-19D3AS - PLAN #1 11-16-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.00	9,980.53	10,099.24	9,980.53	25.62	25.99	178.99	-394.05	-668.92	506.68	455.96	50.72	9.990	
10,200.00	10,080.53	10,199.24	10,080.53	25.81	26.18	178.99	-394.05	-668.92	506.68	455.58	51.10	9.915	
10,300.00	10,180.53	10,299.24	10,180.53	26.00	26.36	178.99	-394.05	-668.92	506.68	455.20	51.48	9.841	
10,400.00	10,280.53	10,399.24	10,280.53	26.19	26.55	178.99	-394.05	-668.92	506.68	454.81	51.87	9.768	
10,500.00	10,380.53	10,499.24	10,380.53	26.39	26.74	178.99	-394.05	-668.92	506.68	454.43	52.26	9.696	
10,544.98	10,425.51	10,544.22	10,425.51	26.47	26.82	178.99	-394.05	-668.92	506.68	454.25	52.43	9.664	
10,582.47	10,463.00	10,559.72	10,441.00	26.55	26.85	178.99	-394.05	-668.92	507.16	454.63	52.53	9.654	



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 921-19D PAD - NBU 921-19F1BS - NBU 921-19F1BS - PLAN #1 11-16-09 RHS													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	167.54	-58.27	12.88	59.68					
100.00	100.00	100.00	100.00	0.10	0.10	167.54	-58.27	12.88	59.68	59.49	0.19	308.737		
200.00	200.00	200.00	200.00	0.32	0.32	167.54	-58.27	12.88	59.68	59.04	0.64	92.837		
300.00	300.00	300.00	300.00	0.55	0.55	167.54	-58.27	12.88	59.68	58.59	1.09	54.632 CC, ES		
400.00	400.00	397.39	397.35	0.77	0.75	166.24	-59.98	14.68	61.81	60.29	1.52	40.744		
500.00	500.00	494.28	493.95	1.00	0.96	162.87	-65.06	20.05	68.34	66.39	1.95	35.043		
600.00	600.00	590.18	589.07	1.22	1.21	158.53	-73.39	28.87	79.62	77.19	2.43	32.788		
700.00	700.00	684.63	682.04	1.45	1.53	154.23	-84.79	40.93	95.85	92.88	2.97	32.264 SF		
800.00	800.00	777.21	772.26	1.67	1.92	150.52	-99.02	55.97	117.08	113.50	3.59	32.657		
900.00	900.00	867.55	859.24	1.89	2.38	147.52	-115.79	73.70	143.18	138.91	4.27	33.513		
1,000.00	1,000.00	955.36	942.57	2.12	2.91	145.17	-134.77	93.78	173.94	168.92	5.03	34.601		
1,100.00	1,100.00	1,040.37	1,021.97	2.34	3.49	143.34	-155.64	115.85	209.13	203.30	5.83	35.861		
1,200.00	1,200.00	1,131.41	1,106.04	2.57	4.18	141.83	-179.62	141.22	247.05	240.31	6.75	36.627		
1,300.00	1,300.00	1,223.75	1,191.31	2.79	4.89	140.70	-203.98	166.97	285.13	277.45	7.68	37.112		
1,400.00	1,400.00	1,316.09	1,276.57	3.02	5.62	139.83	-228.33	192.73	323.28	314.65	8.63	37.466		
1,500.00	1,500.00	1,408.43	1,361.84	3.24	6.35	139.15	-252.68	218.48	361.48	351.90	9.58	37.735		
1,600.00	1,600.00	1,500.77	1,447.11	3.47	7.08	138.60	-277.04	244.23	399.72	389.19	10.53	37.947		
1,700.00	1,700.00	1,593.10	1,532.37	3.69	7.82	138.15	-301.39	269.99	437.98	426.49	11.49	38.117		
1,800.00	1,800.00	1,685.44	1,617.64	3.92	8.56	137.76	-325.74	295.74	476.26	463.81	12.45	38.258		
1,900.00	1,900.00	1,777.78	1,702.90	4.14	9.30	137.44	-350.09	321.50	514.56	501.15	13.41	38.376		
2,000.00	2,000.00	1,870.12	1,788.17	4.37	10.05	137.16	-374.45	347.25	552.87	538.50	14.37	38.477		
2,100.00	2,100.00	1,962.46	1,873.43	4.59	10.79	136.91	-398.80	373.01	591.19	575.86	15.33	38.563		
2,200.00	2,200.00	2,054.80	1,958.70	4.82	11.54	136.70	-423.15	398.76	629.52	613.23	16.29	38.639		
2,300.00	2,300.00	2,147.14	2,043.97	5.04	12.28	136.51	-447.50	424.51	667.85	650.60	17.25	38.705		
2,400.00	2,400.00	2,239.48	2,129.23	5.27	13.03	136.34	-471.86	450.27	706.19	687.97	18.22	38.764		
2,500.00	2,500.00	2,331.82	2,214.50	5.49	13.78	136.19	-496.21	476.02	744.54	725.35	19.18	38.817		
2,608.00	2,608.00	2,431.55	2,306.58	5.73	14.58	136.04	-522.51	503.84	785.95	765.73	20.22	38.867		
2,700.00	2,699.96	2,515.76	2,384.35	5.93	15.27	-142.87	-544.72	527.33	822.87	810.03	21.84	64.110		
2,800.00	2,799.68	2,605.47	2,467.18	6.14	15.99	-142.42	-568.38	552.35	866.65	853.43	23.22	65.539		
2,900.00	2,898.86	2,693.04	2,548.04	6.36	16.70	-142.03	-591.47	576.77	914.19	900.60	24.59	67.282		
3,000.00	2,997.25	2,778.22	2,626.70	6.60	17.39	-141.69	-613.94	600.53	965.42	951.48	26.03	69.292		
3,100.00	3,094.58	2,860.79	2,702.94	6.88	18.06	-141.36	-635.71	623.56	1,020.28	1,006.01	27.57	71.503		
3,200.00	3,190.57	2,940.51	2,776.56	7.20	18.71	-141.00	-656.74	645.79	1,078.70	1,064.09	29.16	73.833		
3,300.00	3,284.96	3,017.17	2,847.35	7.59	19.33	-140.60	-676.96	667.17	1,140.61	1,125.64	30.87	76.168		
3,403.61	3,380.80	3,093.15	2,917.50	8.08	19.95	-140.09	-696.99	688.36	1,208.34	1,192.94	32.69	78.440		
3,500.00	3,468.94	3,162.12	2,981.19	8.62	20.51	-141.19	-715.19	707.60	1,273.15	1,257.33	34.59	80.449		
3,600.00	3,560.39	3,233.69	3,047.27	9.22	21.09	-142.23	-734.06	727.56	1,340.65	1,324.35	36.59	82.256		
3,700.00	3,651.84	3,305.25	3,113.35	9.86	21.67	-143.17	-752.93	747.52	1,408.38	1,391.58	38.69	83.824		
3,800.00	3,743.29	3,376.81	3,179.43	10.54	22.25	-144.03	-771.80	767.48	1,476.31	1,458.98	40.87	85.189		
3,900.00	3,834.73	3,448.37	3,245.51	11.24	22.83	-144.82	-790.68	787.44	1,544.41	1,526.53	43.13	86.385		
4,000.00	3,926.18	3,519.93	3,311.59	11.97	23.41	-145.54	-809.55	807.40	1,612.65	1,594.21	45.47	87.438		
4,100.00	4,017.63	3,591.49	3,377.67	12.71	23.99	-146.21	-828.42	827.36	1,681.03	1,662.01	47.87	88.370		
4,200.00	4,109.08	3,663.05	3,443.75	13.47	24.57	-146.82	-847.29	847.32	1,749.53	1,729.92	50.37	89.198		
4,213.74	4,121.64	3,672.88	3,452.83	13.58	24.65	-146.90	-849.89	850.06	1,758.95	1,739.25	50.87	89.304		
4,300.00	4,201.16	3,735.68	3,510.81	14.15	25.16	-148.41	-866.45	867.57	1,817.12	1,796.80	53.37	89.425		
4,400.00	4,294.85	3,811.06	3,580.41	14.71	25.77	-149.92	-886.33	888.60	1,882.03	1,860.95	55.87	89.310		
4,500.00	4,389.97	3,889.07	3,652.45	15.21	26.41	-151.19	-906.90	910.35	1,944.06	1,922.19	58.37	88.885		
4,600.00	4,486.34	3,969.58	3,726.79	15.67	27.06	-152.27	-928.13	932.81	2,003.08	1,980.39	60.87	88.286		
4,700.00	4,583.78	4,052.42	3,803.29	16.07	27.73	-153.17	-949.98	955.91	2,058.94	2,035.44	63.37	87.605		
4,800.00	4,682.11	4,137.43	3,881.79	16.41	28.42	-153.92	-972.40	979.62	2,111.55	2,087.25	65.87	86.900		
4,900.00	4,781.14	4,381.50	4,109.96	16.70	29.94	-154.52	-1,031.79	1,042.43	2,158.81	2,133.34	68.37	84.743		
5,000.00	4,880.68	4,758.84	4,474.89	16.93	31.54	-154.90	-1,097.01	1,111.40	2,192.01	2,165.19	70.87	81.736		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 921-19D PAD - NBU 921-19F1BS - NBU 921-19F1BS - PLAN #1 11-16-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.00	4,980.54	5,167.41	4,880.31	17.11	32.45	-155.11	-1,129.83	1,146.11	2,208.25	2,180.32	27.93	79.067	
5,168.47	5,049.00	5,336.15	5,049.00	17.20	32.60	124.27	-1,131.91	1,148.31	2,209.89	2,181.51	28.38	77.880	
5,200.00	5,080.53	5,367.68	5,080.53	17.24	32.63	124.27	-1,131.91	1,148.31	2,209.89	2,181.42	28.47	77.620	
5,300.00	5,180.53	5,467.68	5,180.53	17.38	32.69	124.27	-1,131.91	1,148.31	2,209.89	2,181.10	28.78	76.775	
5,400.00	5,280.53	5,567.68	5,280.53	17.53	32.76	124.27	-1,131.91	1,148.31	2,209.89	2,180.79	29.10	75.945	
5,500.00	5,380.53	5,667.68	5,380.53	17.67	32.83	124.27	-1,131.91	1,148.31	2,209.89	2,180.47	29.42	75.125	
5,600.00	5,480.53	5,767.68	5,480.53	17.82	32.90	124.27	-1,131.91	1,148.31	2,209.89	2,180.15	29.74	74.314	
5,700.00	5,580.53	5,867.68	5,580.53	17.97	32.97	124.27	-1,131.91	1,148.31	2,209.89	2,179.83	30.06	73.513	
5,800.00	5,680.53	5,967.68	5,680.53	18.12	33.04	124.27	-1,131.91	1,148.31	2,209.89	2,179.50	30.39	72.722	
5,900.00	5,780.53	6,067.68	5,780.53	18.27	33.12	124.27	-1,131.91	1,148.31	2,209.89	2,179.17	30.72	71.941	
6,000.00	5,880.53	6,167.68	5,880.53	18.42	33.19	124.27	-1,131.91	1,148.31	2,209.89	2,178.84	31.05	71.169	
6,100.00	5,980.53	6,267.68	5,980.53	18.58	33.27	124.27	-1,131.91	1,148.31	2,209.89	2,178.50	31.39	70.408	
6,200.00	6,080.53	6,367.68	6,080.53	18.73	33.35	124.27	-1,131.91	1,148.31	2,209.89	2,178.16	31.73	69.658	
6,300.00	6,180.53	6,467.68	6,180.53	18.89	33.43	124.27	-1,131.91	1,148.31	2,209.89	2,177.82	32.07	68.917	
6,400.00	6,280.53	6,567.68	6,280.53	19.05	33.51	124.27	-1,131.91	1,148.31	2,209.89	2,177.48	32.41	68.187	
6,500.00	6,380.53	6,667.68	6,380.53	19.21	33.59	124.27	-1,131.91	1,148.31	2,209.89	2,177.13	32.76	67.467	
6,600.00	6,480.53	6,767.68	6,480.53	19.37	33.68	124.27	-1,131.91	1,148.31	2,209.89	2,176.78	33.10	66.757	
6,700.00	6,580.53	6,867.68	6,580.53	19.53	33.76	124.27	-1,131.91	1,148.31	2,209.89	2,176.43	33.45	66.058	
6,800.00	6,680.53	6,967.68	6,680.53	19.69	33.85	124.27	-1,131.91	1,148.31	2,209.89	2,176.08	33.81	65.368	
6,900.00	6,780.53	7,067.68	6,780.53	19.86	33.94	124.27	-1,131.91	1,148.31	2,209.89	2,175.73	34.16	64.689	
7,000.00	6,880.53	7,167.68	6,880.53	20.02	34.02	124.27	-1,131.91	1,148.31	2,209.89	2,175.37	34.52	64.020	
7,100.00	6,980.53	7,267.68	6,980.53	20.19	34.11	124.27	-1,131.91	1,148.31	2,209.89	2,175.01	34.88	63.361	
7,200.00	7,080.53	7,367.68	7,080.53	20.36	34.21	124.27	-1,131.91	1,148.31	2,209.89	2,174.65	35.24	62.712	
7,300.00	7,180.53	7,467.68	7,180.53	20.53	34.30	124.27	-1,131.91	1,148.31	2,209.89	2,174.29	35.60	62.072	
7,400.00	7,280.53	7,567.68	7,280.53	20.70	34.39	124.27	-1,131.91	1,148.31	2,209.89	2,173.92	35.97	61.442	
7,500.00	7,380.53	7,667.68	7,380.53	20.87	34.49	124.27	-1,131.91	1,148.31	2,209.89	2,173.55	36.33	60.822	
7,600.00	7,480.53	7,767.68	7,480.53	21.04	34.58	124.27	-1,131.91	1,148.31	2,209.89	2,173.19	36.70	60.212	
7,700.00	7,580.53	7,867.68	7,580.53	21.22	34.68	124.27	-1,131.91	1,148.31	2,209.89	2,172.82	37.07	59.610	
7,800.00	7,680.53	7,967.68	7,680.53	21.39	34.78	124.27	-1,131.91	1,148.31	2,209.89	2,172.44	37.44	59.018	
7,900.00	7,780.53	8,067.68	7,780.53	21.57	34.88	124.27	-1,131.91	1,148.31	2,209.89	2,172.07	37.82	58.436	
8,000.00	7,880.53	8,167.68	7,880.53	21.74	34.98	124.27	-1,131.91	1,148.31	2,209.89	2,171.70	38.19	57.862	
8,100.00	7,980.53	8,267.68	7,980.53	21.92	35.08	124.27	-1,131.91	1,148.31	2,209.89	2,171.32	38.57	57.297	
8,200.00	8,080.53	8,367.68	8,080.53	22.10	35.19	124.27	-1,131.91	1,148.31	2,209.89	2,170.94	38.95	56.740	
8,300.00	8,180.53	8,467.68	8,180.53	22.28	35.29	124.27	-1,131.91	1,148.31	2,209.89	2,170.56	39.33	56.193	
8,400.00	8,280.53	8,567.68	8,280.53	22.46	35.40	124.27	-1,131.91	1,148.31	2,209.89	2,170.18	39.71	55.654	
8,500.00	8,380.53	8,667.68	8,380.53	22.64	35.50	124.27	-1,131.91	1,148.31	2,209.89	2,169.80	40.09	55.123	
8,600.00	8,480.53	8,767.68	8,480.53	22.82	35.61	124.27	-1,131.91	1,148.31	2,209.89	2,169.41	40.47	54.600	
8,700.00	8,580.53	8,867.68	8,580.53	23.00	35.72	124.27	-1,131.91	1,148.31	2,209.89	2,169.03	40.86	54.086	
8,800.00	8,680.53	8,967.68	8,680.53	23.18	35.83	124.27	-1,131.91	1,148.31	2,209.89	2,168.64	41.24	53.580	
8,900.00	8,780.53	9,067.68	8,780.53	23.37	35.94	124.27	-1,131.91	1,148.31	2,209.89	2,168.26	41.63	53.081	
9,000.00	8,880.53	9,167.68	8,880.53	23.55	36.05	124.27	-1,131.91	1,148.31	2,209.89	2,167.87	42.02	52.590	
9,100.00	8,980.53	9,267.68	8,980.53	23.73	36.16	124.27	-1,131.91	1,148.31	2,209.89	2,167.48	42.41	52.107	
9,200.00	9,080.53	9,367.68	9,080.53	23.92	36.28	124.27	-1,131.91	1,148.31	2,209.89	2,167.09	42.80	51.631	
9,300.00	9,180.53	9,467.68	9,180.53	24.11	36.39	124.27	-1,131.91	1,148.31	2,209.89	2,166.69	43.19	51.162	
9,400.00	9,280.53	9,567.68	9,280.53	24.29	36.51	124.27	-1,131.91	1,148.31	2,209.89	2,166.30	43.59	50.701	
9,500.00	9,380.53	9,667.68	9,380.53	24.48	36.63	124.27	-1,131.91	1,148.31	2,209.89	2,165.91	43.98	50.246	
9,600.00	9,480.53	9,767.68	9,480.53	24.67	36.74	124.27	-1,131.91	1,148.31	2,209.89	2,165.51	44.38	49.799	
9,700.00	9,580.53	9,867.68	9,580.53	24.86	36.86	124.27	-1,131.91	1,148.31	2,209.89	2,165.12	44.77	49.358	
9,800.00	9,680.53	9,967.68	9,680.53	25.05	36.98	124.27	-1,131.91	1,148.31	2,209.89	2,164.72	45.17	48.924	
9,900.00	9,780.53	10,067.68	9,780.53	25.24	37.10	124.27	-1,131.91	1,148.31	2,209.89	2,164.32	45.57	48.496	
10,000.00	9,880.53	10,167.68	9,880.53	25.43	37.23	124.27	-1,131.91	1,148.31	2,209.89	2,163.92	45.97	48.075	
10,100.00	9,980.53	10,267.68	9,980.53	25.62	37.35	124.27	-1,131.91	1,148.31	2,209.89	2,163.52	46.37	47.661	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Weatherford International Ltd.

Anticollision Report



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Offset Design NBU 921-19D PAD - NBU 921-19F1BS - NBU 921-19F1BS - PLAN #1 11-16-09 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,200.00	10,080.53	10,367.68	10,080.53	25.81	37.47	124.27	-1,131.91	1,148.31	2,209.89	2,163.12	46.77	47.252	
10,300.00	10,180.53	10,467.68	10,180.53	26.00	37.60	124.27	-1,131.91	1,148.31	2,209.89	2,162.72	47.17	46.850	
10,400.00	10,280.53	10,567.68	10,280.53	26.19	37.72	124.27	-1,131.91	1,148.31	2,209.89	2,162.32	47.57	46.453	
10,456.41	10,336.94	10,624.09	10,336.94	26.30	37.80	124.27	-1,131.91	1,148.31	2,209.89	2,162.09	47.80	46.232	
10,500.00	10,380.53	10,644.15	10,357.00	26.39	37.82	124.27	-1,131.91	1,148.31	2,210.01	2,162.08	47.93	46.109	
10,582.47	10,463.00	10,644.15	10,357.00	26.55	37.82	124.27	-1,131.91	1,148.31	2,212.43	2,164.32	48.11	45.990	

Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4803.00ft (Original Well Elev) Coordinates are relative to: NBU 921-19D2DS

Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N

Grid Convergence at Surface is: 0.90°



Company:	ANADARKO PETROLEUM CORP.	Local Co-ordinate Reference:	Well NBU 921-19D2DS
Project:	UINTAH COUNTY, UTAH (nad 27)	TVD Reference:	WELL @ 4803.00ft (Original Well Elev)
Reference Site:	NBU 921-19D PAD	MD Reference:	WELL @ 4803.00ft (Original Well Elev)
Site Error:	0.00ft	North Reference:	True
Reference Well:	NBU 921-19D2DS	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00ft	Output errors are at	2.00 sigma
Reference Wellbore	NBU 921-19D2DS	Database:	EDM 2003.21 Single User Db
Reference Design:	PLAN #1 11-16-09 RHS	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4803.00ft (Original Well Elev) Coordinates are relative to: NBU 921-19D2DS

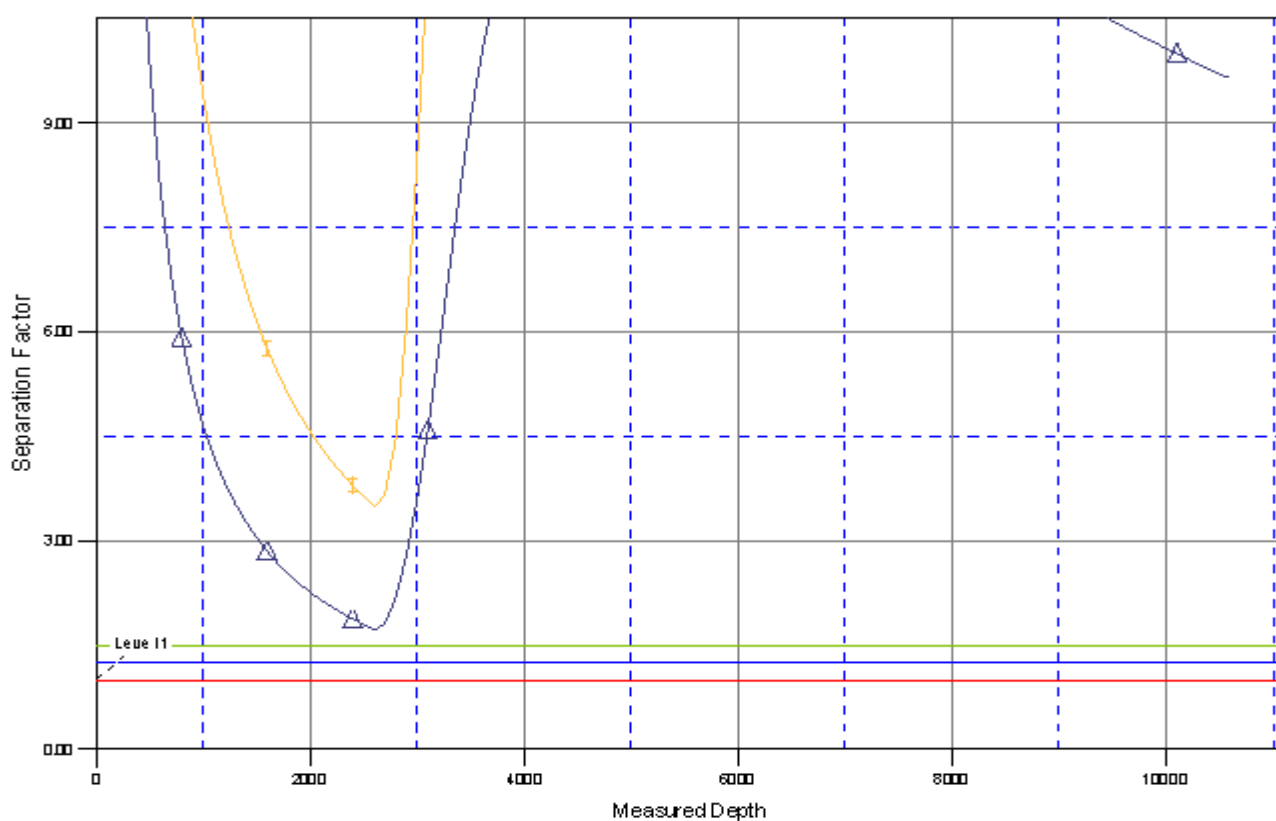
Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N



Central Meridian is 111° 0' 0.000 W °

Grid Convergence at Surface is: 0.90°

Separation Factor Plot



LEGEND

1904CS, NBU 921-1904CS, PLAN#1 11-16-09 RHS \0  NBU 921-19D3AS, NBU 921-19D3AS, PLAN#1 11-16-09 RHS \0  NBU 921-19F1BS, NBU 921-19F1BS, PLAN#1 11-16-09 RHS \0

NBU 921-19D2DS

Pad: NBU 921-19D

Surface: 482' FNL, 1,356' FWL (NW/4NW/4) Lot 1

BHL: 365' FNL 680' FWL (NW/4NW/4) Lot 1

Sec. 19 T9S R21

Uintah, Utah

Mineral Lease: UTU 0581

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. – 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,656'	
Birds Nest	1,924'	Water
Mahogany	2,308'	Water
Wasatch	5,049'	Gas
Mesaverde	8,171'	Gas
MVU2	9,155'	Gas
MVL1	9,706'	Gas
TVD	10,463'	
TD	10,582'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program.

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program.

6. **Evaluation Program:**

Please refer to the attached Drilling Program.

7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 10,463' TVD, approximately equals 6,627 psi (calculated at 0.63 psi/foot).

Maximum anticipated surface pressure equals approximately 4,325 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

Kerr-McGee Oil & Gas Onshore LP (KMG) also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	April 8, 2010		
WELL NAME	NBU 921-19D2DS	TD	10,463'	TVD	10,582' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
				FINISHED ELEVATION	4,789'
SURFACE LOCATION	NW/4 NW/4	482' FNL	1,356' FWL	Sec 19	T 9S
				R 21E	Lot 1
	Latitude:	40.027473	Longitude:	-109.600680	NAD 83
BTM HOLE LOCATION	NW/4 NW/4	365' FNL	680' FWL	Sec 19	T 9S
				R 21E	Lot 1
	Latitude:	40.027782	Longitude:	-109.603101	NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Tribe (Surface), UDOGM Tri-County Health Dept.				

NBU 921-19D2DS Drilling Prog.-Directional well-Greater than 9650' TVD-021010.xls



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,460'	28.00	IJ-55	LTC	0.75	1.63	5.00
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9,769'	11.60	I-80	BTC	1.75	1.07	2.79
						10,690	8,650	279,000
	4-1/2"	9,769' to 10,582'	11.60	HCP-110	LTC	59.77	1.28	36.50
		813' of HCP-110 pipe						

*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.19

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.4 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 4,325 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.4 ppg)

0.63 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MABHP 6,627 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	TAIL	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,960'	65/35 Poz + 6% Gel + 10 pps gilsonite	180	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,542'	Premium Lite II + 3% KCl + 0.25 pps	370	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,040'	50/50 Poz/G + 10% salt + 2% gel	1,480	40%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

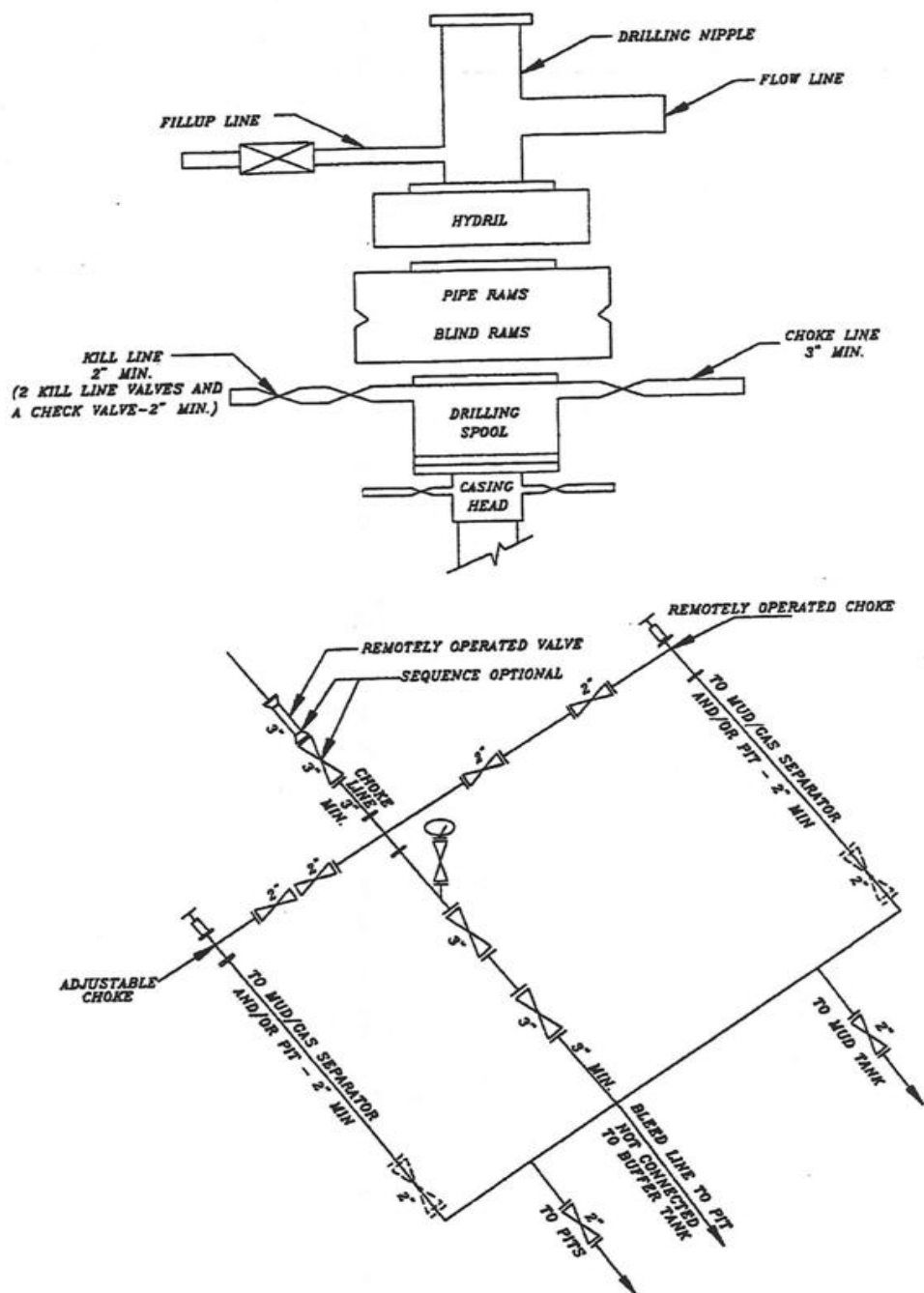
DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

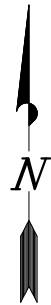
DATE:

EXHIBIT A
NBU 921-19D2DS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

WELL PAD INTERFERENCE PLAT

DIRECTIONAL PAD – NBU 921-19F1BS,
NBU 921-19C4CS, NBU 921-19D3AS & NBU 921-19D2DS

LATITUDE & LONGITUDE Surface Position – (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
921-19F1BS	40°01'38.325" 40.027312°	109°36'02.281" 109.600634°
921-19C4CS	40°01'38.518" 40.027366°	109°36'02.336" 109.600649°
921-19D3AS	40°01'38.711" 40.027420°	109°36'02.391" 109.600664°
921-19D2DS	40°01'38.903" 40.027473°	109°36'02.447" 109.600680°

LATITUDE & LONGITUDE Bottom Hole – (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
921-19F1BS	40°01'27.712" 40.024364°	109°35'47.682" 109.596578°
921-19C4CS	40°01'32.513" 40.025698°	109°35'47.791" 109.596609°
921-19D3AS	40°01'35.006" 40.026391°	109°36'11.048" 109.603069°
921-19D2DS	40°01'40.014" 40.027782°	109°36'11.163" 109.603101°

RELATIVE COORDINATES From Surface Position to Bottom Hole		
WELL	NORTH	EAST
921-19F1BS	-1,076'	1,134'
921-19C4CS	-609'	1,131'
921-19D3AS	-374'	-674'
921-19D2DS	114'	-678'

SURFACE POSITION FOOTAGES:

NBU 921-19F1BS
541' FNL & 1368' FWLNBU 921-19C4CS
521' FNL & 1364' FWLNBU 921-19D3AS
502' FNL & 1360' FWLNBU 921-19D2DS
482' FNL & 1356' FWL

NBU 921-19D2DS

NBU 921-19D3AS

NBU 921-19C4CS

NBU 921-19F1BS

BOTTOM HOLE FOOTAGES

NBU 921-19F1BS
1623' FNL & 2485' FWLNBU 921-19C4CS
1137' FNL & 2485' FWLNBU 921-19D3AS
872' FNL & 680' FWLNBU 921-19D2DS
365' FNL & 680' FWLBASIS OF BEARINGS IS THE NORTH
LINE OF THE NW 1/4 OF SECTION
19, T9S, R21E, S.L.B.&M. WHICH IS
TAKEN FROM GLOBAL POSITIONING
SATELLITE OBSERVATIONS TO BEAR
S89°41'11"W.
 $AZ = 279.50806^\circ$
 $N80^\circ29'31"W - 687.49'$
 (To Bottom Hole)

 $AZ = 240.98111^\circ$
 $S60^\circ58'52"W - 770.99'$
 (To Bottom Hole)

 $AZ = 167.78694^\circ$
 $S12^\circ12'47"E$
 $AZ = 118.32306^\circ$
 $S61^\circ40'37"E - 1284.65'$
 (To Bottom Hole)

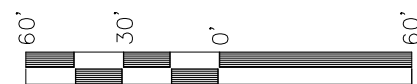
 $AZ = 133.48417^\circ$
 $S46^\circ30'57"E - 1563.49'$
 (To Bottom Hole)

LATITUDE & LONGITUDE Surface Position – (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
921-19F1BS	40°01'38.452" 40.027348°	109°35'59.795" 109.599943°
921-19C4CS	40°01'38.645" 40.027401°	109°35'59.850" 109.599958°
921-19D3AS	40°01'38.839" 40.027455°	109°35'59.905" 109.599974°
921-19D2DS	40°01'39.030" 40.027508°	109°35'59.961" 109.599989°

LATITUDE & LONGITUDE Bottom Hole – (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
921-19F1BS	40°01'27.839" 40.024400°	109°35'45.196" 109.595888°
921-19C4CS	40°01'32.640" 40.025733°	109°35'45.306" 109.595918°
921-19D3AS	40°01'35.133" 40.026426°	109°36'08.562" 109.602378°
921-19D2DS	40°01'40.142" 40.027817°	109°36'08.676" 109.602410°

Kerr-McGee
Oil & Gas Onshore, LP

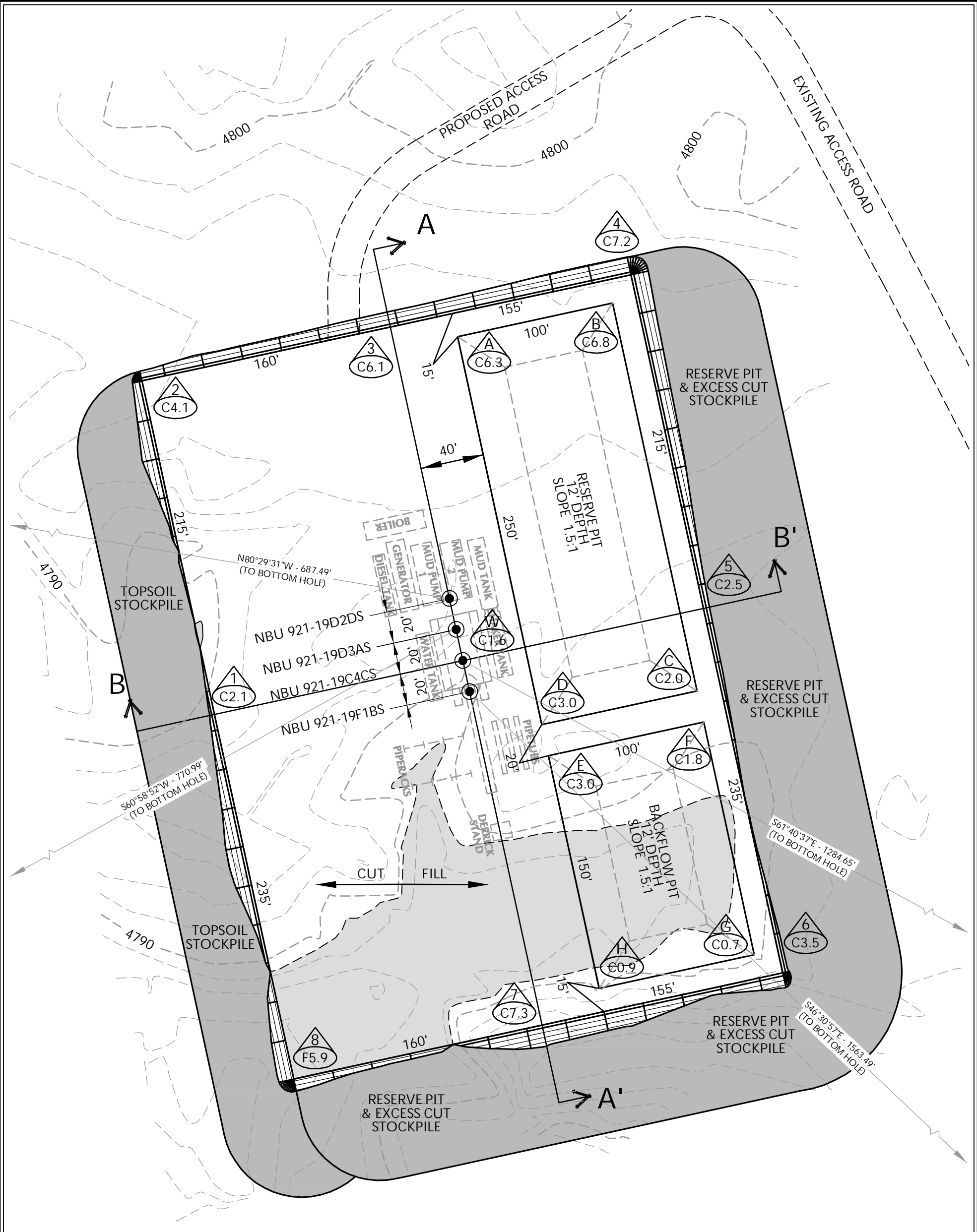
1099 18th Street – Denver, Colorado 80202

NBU 921-19F1BS, NBU 921-19C4CS,
NBU 921-19D3AS & NBU 921-19D2DS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M. UTAH COUNTY, UTAH.CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

SCALE

DATE SURVEYED: 01-07-09	SURVEYED BY: M.S.B.
DATE DRAWN: 01-13-09	DRAWN BY: M.W.W.
	REVISED: 07-01-09

Timberline
Engineering & Land Surveying, Inc.
(435) 789-1365
209 NORTH 300 WEST VERNAL, UTAH 84078SHEET
5
OF 13



WELL PAD NBU 921-19D QUANTITIES

EXISTING GRADE @ CENTER OF WELL PAD = 4790.4'
FINISHED GRADE ELEVATION = 4788.8'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 17,473 C.Y.
TOTAL FILL FOR WELL PAD = 4,067 C.Y.
TOPSOIL @ 6" DEPTH = 2,815 C.Y.
EXCESS MATERIAL = 13,406 C.Y.
TOTAL DISTURBANCE = 3.49 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 32,370 BARRELS
RESERVE PIT VOLUME
+/- 8,510 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)
+/- 18,300 BARRELS
BACKFLOW PIT VOLUME
+/- 4,860 CY

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)



HORIZONTAL 0 30 60 1" = 60'
2' CONTOURS

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

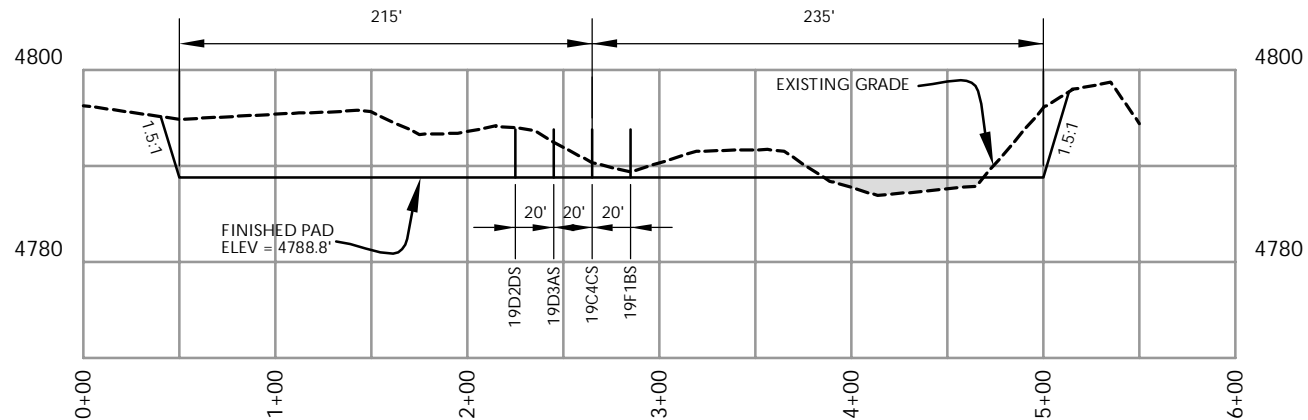


CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

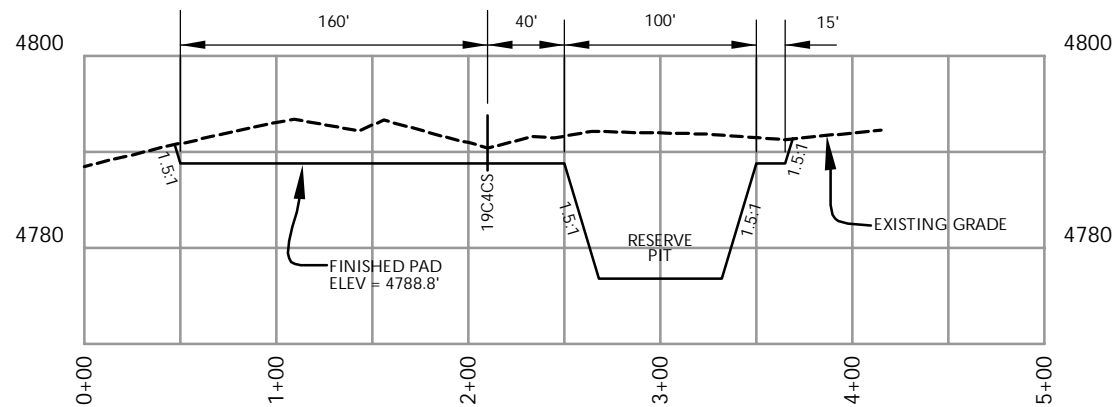
WELL PAD - LOCATION LAYOUT
NBU 921-19F1BS, NBU 921-19C4CS,
NBU 921-19D3AS & NBU 921-19D2DS
LOCATED IN SECTION 19, T.9S., R.21E.
S.L.B.&M., Uintah County, Utah

Scale: 1"=60'	Date: 3/5/09	SHEET NO: 6
REVISED:	DJD 7/31/09	6 OF 13

TIMBERLINE ENGINEERING & LAND SURVEYING, INC. (435) 789-1365
209 NORTH 300 WEST - VERNAL, UTAH 84078



CROSS SECTION A-A'



CROSS SECTION B-B'

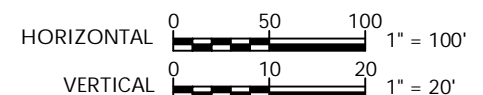
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS
NBU 921-19F1BS, NBU 921-19C4CS,
NBU 921-19D3AS & NBU 921-19D2DS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

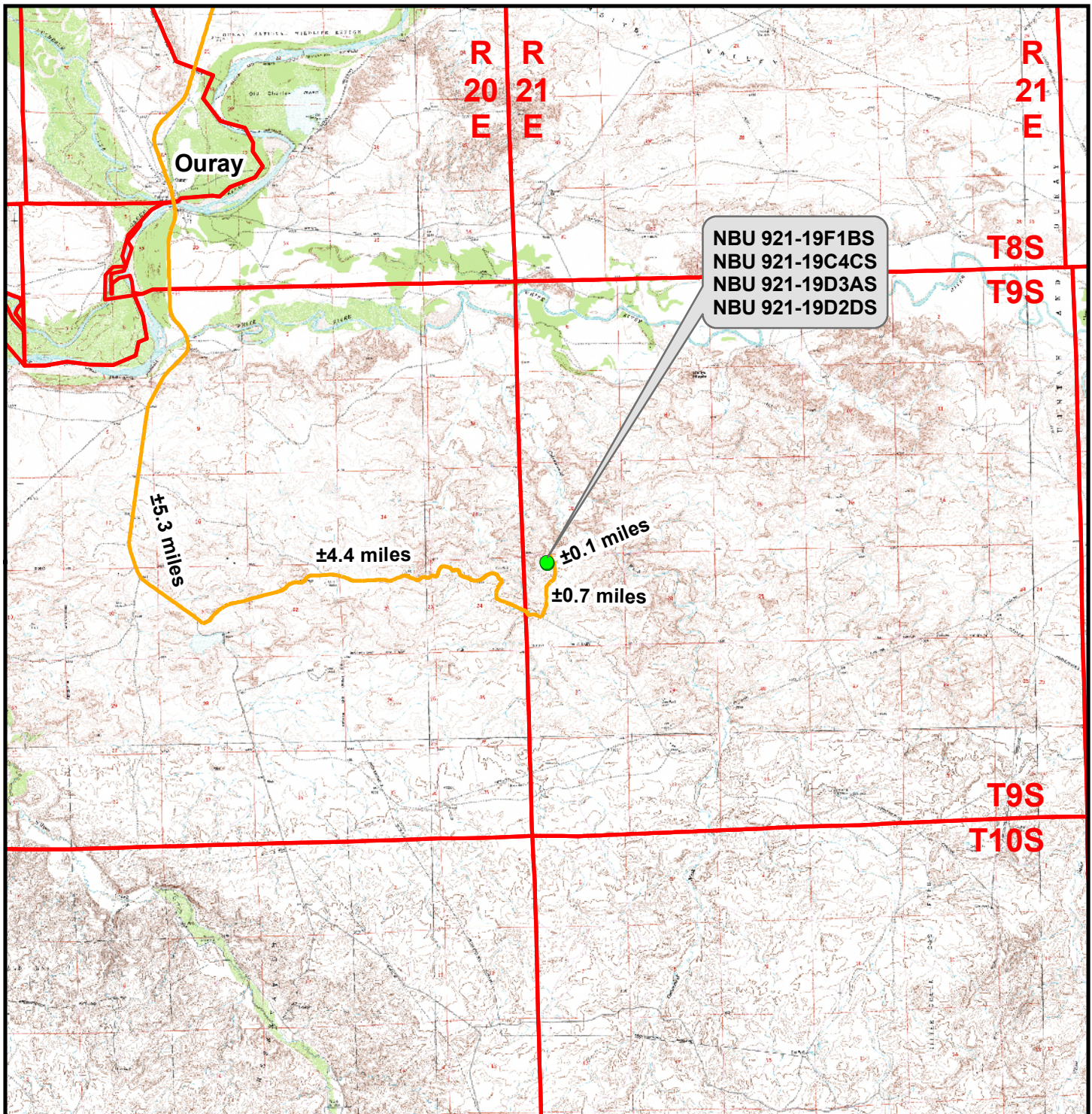


CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

Scale: 1"=100'	Date: 3/5/09	SHEET NO:
REVISED:	DJD 7/31/09	7 OF 13



TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078



Legend

- Proposed Well Location
- Access Route - Proposed

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

**NBU 921-19F1BS, NBU 921-19C4CS,
NBU 921-19D3AS & NBU 921-19D2DS**

Topo A

**Located In Section 19, T9S, R21E
S.L.B.&M., Uintah County, Utah**

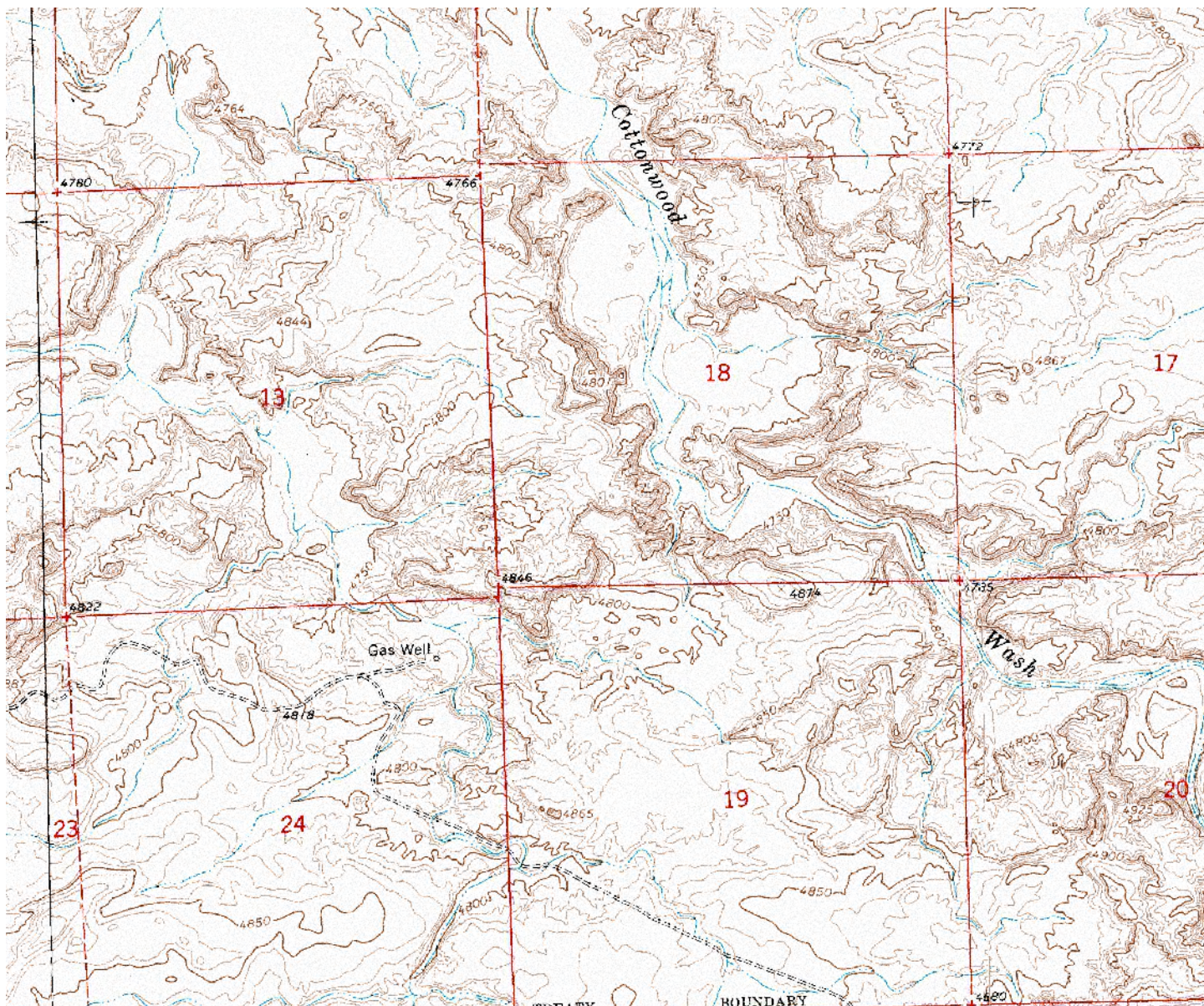


Scale: 1:100,000	NAD83 USP Central
Drawn: JELO	Date: 24 Feb 2009
Revised: JELO	Date: 31 July 2009

Sheet No:

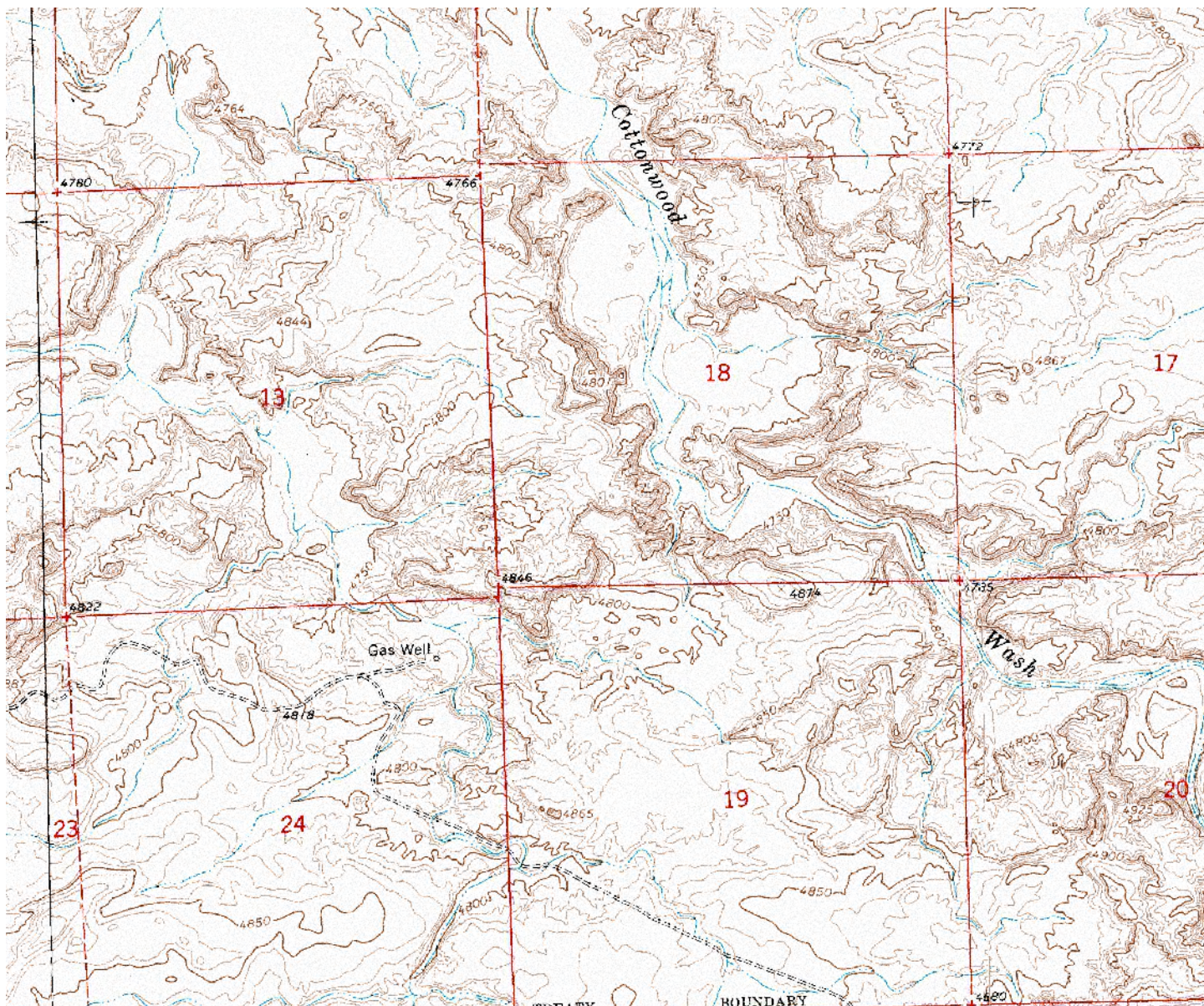
9

9 of 13



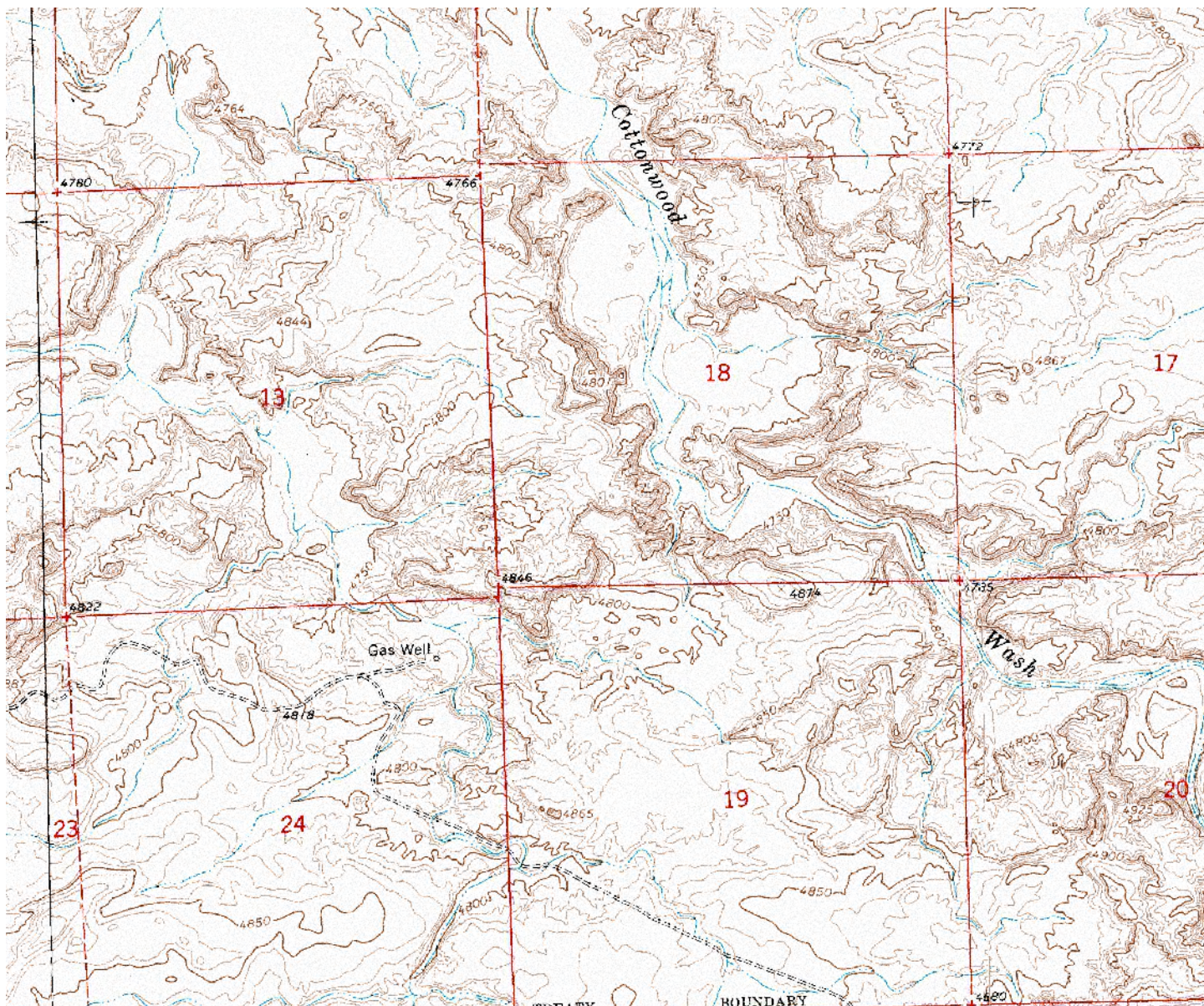
CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

Sheet No:



CONSULTING, LLC
371 Coffeen Avenue
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

Sheet No:



CONSULTING, LLC
371 Coffeen Avenue
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Phone (307) 674-0609
Fax (307) 674-0182

Sheet No:

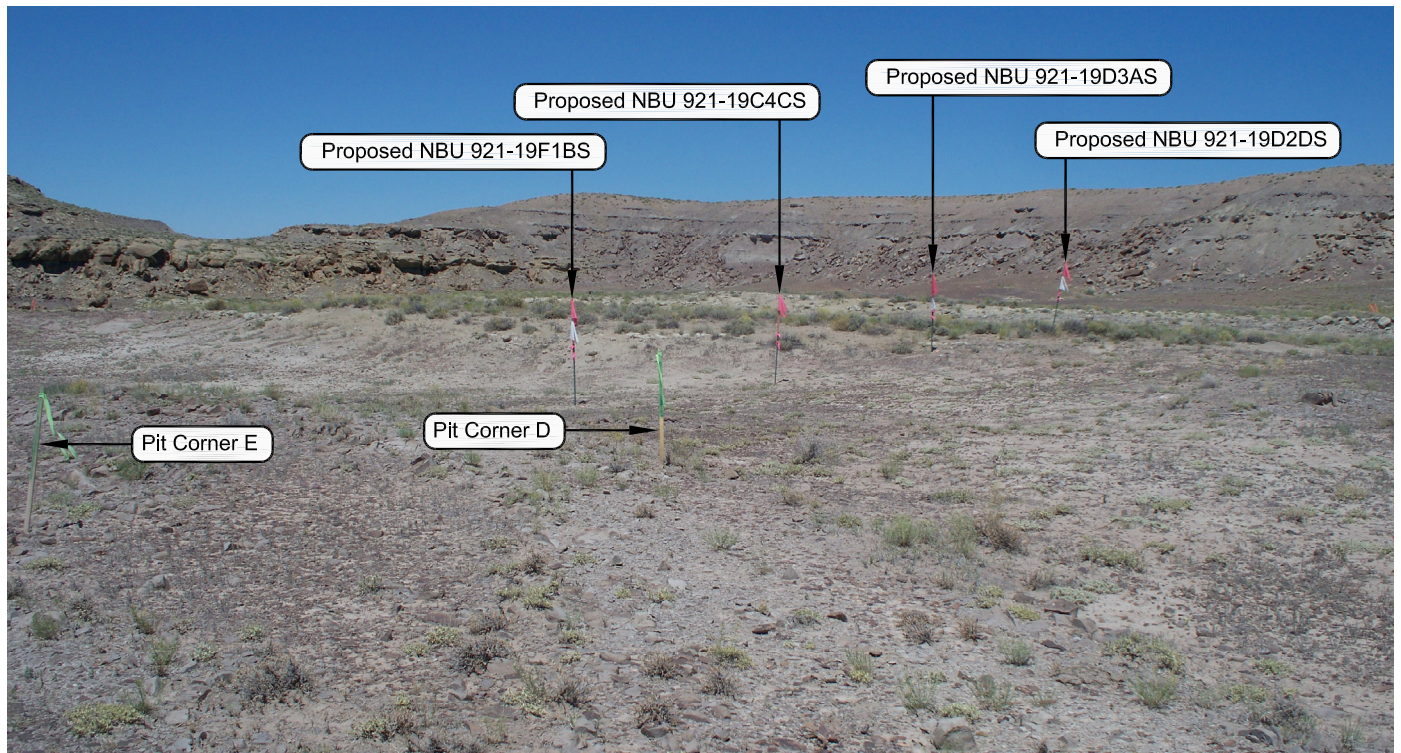


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKES

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

**Kerr-McGee
Oil & Gas Onshore, LP**

1099 18th Street - Denver, Colorado 80202

NBU 921-19F1BS, NBU 921-19C4CS,
NBU 921-19D3AS & NBU 921-19D2DS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M. UTAH COUNTY, UTAH.



CONSULTING, LLC
371 Coffeen Avenue
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

LOCATION PHOTOS

TAKEN BY: M.S.B.

DRAWN BY: M.W.W.

DATE TAKEN: 06-29-09

DATE DRAWN: 07-01-09

REVISED:

Timberline

Engineering & Land Surveying, Inc.
209 NORTH 300 WEST VERNAL, UTAH 84078

(435) 789-1365

SHEET
8
OF 13

Kerr-McGee Oil & Gas Onshore, LP
NBU 921-19F1BS, NBU 921-19C4CS, NBU 921-19D3AS & NBU 921-19D2DS
Section 19, T9S, R21E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 5.3 MILES TO THE INTERSECTION OF A SERVICE ROAD TO THE EAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY THEN SOUTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 4.4 MILES TO A SECOND SERVICE ROAD TO THE NORTH. EXIT LEFT AND PROCEED NORTHERLY ALONG THE SECOND SERVICE ROAD APPROXIMATELY 0.7 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 315 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 41.2 MILES IN A SOUTHERLY DIRECTION.

NBU 921-19C4CS

Surface: 521' FNL 1,364' FWL (NW/4NW/4) Lot 1
BHL: 1,137' FNL 2,485' FWL (NE/4NW/4)

NBU 921-19D2DS

Surface: 482' FNL, 1,356' FWL (NW/4NW/4) Lot 1
BHL: 365' FNL 680' FWL (NW/4NW/4) Lot 1

NBU 921-19D3AS

Surface: 502' FNL, 1,360' FWL (NW/4NW/4) Lot 1
BHL: 872' FNL 680' FWL (NW/4NW/4) Lot 1

NBU 921-19F1BS

Surface: 541' FNL, 1,368' FWL (NW/4NW/4) Lot 1
BHL: 1,623' FNL 2,485' FWL (SE/4NW/4)

Pad: NBU 921-19D
Sec. 19 T9S R21E

Uintah, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP
Mineral Lease: UTU 0581
Surface Owner: Ute Indian Tribe

ONSHORE ORDER NO. 1

***MULTI-POINT SURFACE USE & OPERATIONS PLAN
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface locations in NW/4 NW/4 of Section 19 T9S R21E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on June 24, 2009. Present were:

- Verlyn Pindell and Dave Gordon – BLM;
- Kolby Kay and Mitch Batty – Timberline Surveying, Inc.
- Tony Kazeck, Jeff Samuels, Raleen White, David Liddell, and Hal Blanchard – Kerr-McGee
- Bucky Secakuku – BIA
- Nick Hall – Grasslands Consulting, Inc.
- Scott Carson – Smiling Lake Consulting
- Keith Montgomery – Montgomery Archaeological Consultants, Inc.

Directional Drilling:

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

1. Existing Roads:

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. Planned Access Roads:

See MDP for additional details on road construction.

Approximately $\pm 315'$ (± 0.06 miles) of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.

3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

4. Location of Existing and Proposed Facilities:

See MDP for additional details on Existing and Proposed Facilities.

The following guidelines will apply if the well is productive.

Approximately 660' (± 0.1 miles) of buried pipeline is proposed around the well pad. Another approximately $\pm 95'$ (± 0.02 miles) of buried pipeline is proposed from the tie in point to the edge of the pad. Refer to Topo D for the existing pipeline. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

5. Location and Type of Water Supply:

See MDP for additional details on Location and Type of Water Supply.

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

No water well is to be drilled on this lease.

6. Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

7. **Methods of Handling Waste Materials:**

See MDP for additional details on Methods of Handling Waste Materials.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E

Ace Oilfield in Sec. 2 T6S R20E

MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

8. **Ancillary Facilities:**

See MDP for additional details on Ancillary Facilities.

None are anticipated.

9. **Well Site Layout:** (See Location Layout Diagram)

See MDP for additional details on Well Site Layout.

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

10. **Plans for Reclamation of the Surface:**

See MDP for additional details on Plans for Reclamation of the Surface.

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

11. **Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe

PO Box 70

Fort Duchesne, Utah 84026

435-722-5141

The mineral ownership is listed below:

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
435-781-4400

12. Other Information:

See MDP for additional details on Other Information.

13. Lessee's or Operators' Representative & Certification:

Danielle Piernot
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720-929-6724)

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.


Danielle Piernot

April 9, 2010
Date



Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
DENVER, CO 80217-3779

April 8, 2010

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
NBU 921-19D2DS
T9S-R21E
Section 19: NWNW surface and bottom hole
Surface: 482' FNL, 1356' FWL
Bottom Hole: 365' FNL, 680' FWL
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-19D2DS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

Joe Matney
Sr. Staff Landman

'APIWellNo:43047510540000'

CLASS I REVIEW OF KERR-MCGEE OIL & GAS
ONSHORE LP'S PROPOSED NBU #921-19C4CS,
NBU #921-19D2DS, NBU #921-19D3AS, AND
NBU #921-19F1BS DRILL LOCATIONS IN
T9S, R21E SECTION 19, UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

Ute Tribal Land
Uintah and Ouray Agency

Prepared Under Contract With:

Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.
P.O. Box 219
Moab, Utah 84532

MOAC Report No. 09-011b

July 30, 2009

United States Department of Interior (FLPMA)
Permit No. 09-UT-60122

Ute Tribal Permit No. A09-363

IPC #09-126

Paleontological Reconnaissance Survey Report

**Survey of Kerr McGee's Proposed Multi-Well Pad, Access Road
& Pipeline for "NBU #921-19F1BS, C4CS, D3AS, &
D2DS" (Sec. 19, T 9 S, R 21 E)**

Ouray SE
Topographic Quadrangle
Uintah County, Utah

August 19, 2009

Prepared by Stephen D. Sandau
Paleontologist for
Intermountain Paleo-Consulting
P. O. Box 1125
Vernal, Utah 84078



Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237

(303) 759-5377 Office (303) 759-5324 Fax

SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

Operator: Kerr-McGee Oil & Gas Onshore LP

Wells: NBU 921-19D Pad (Bores: NBU 921-19D2DS, NBU 921-19D3AS, NBU 921-19C4CS, NBU 921-19F1BS)

Pipelines: Proposed pipeline leading to the NBU 921-19D

Access Roads: Proposed Access Road leading to the NBU 921-19D

Location: Section 19, Township 9 South, Range 21 East; Uintah County, Utah

Survey-Species: Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*) and nesting raptors

Date: 06/16/09

Observer(s): Grasslands Consulting, Inc. Biologists: Nick Hall, Chris Gayer, BJ Lukins, Jay Slocum, Dan Hamilton, Matt Kelahan, and Jonathan Sexauer. Technicians: Chad Johnson

Weather: Partly cloudy, 80-85°F, 0-5 mph winds with no precipitation.

API Number: 4304751054

Well Name: NBU 921-19D2DS

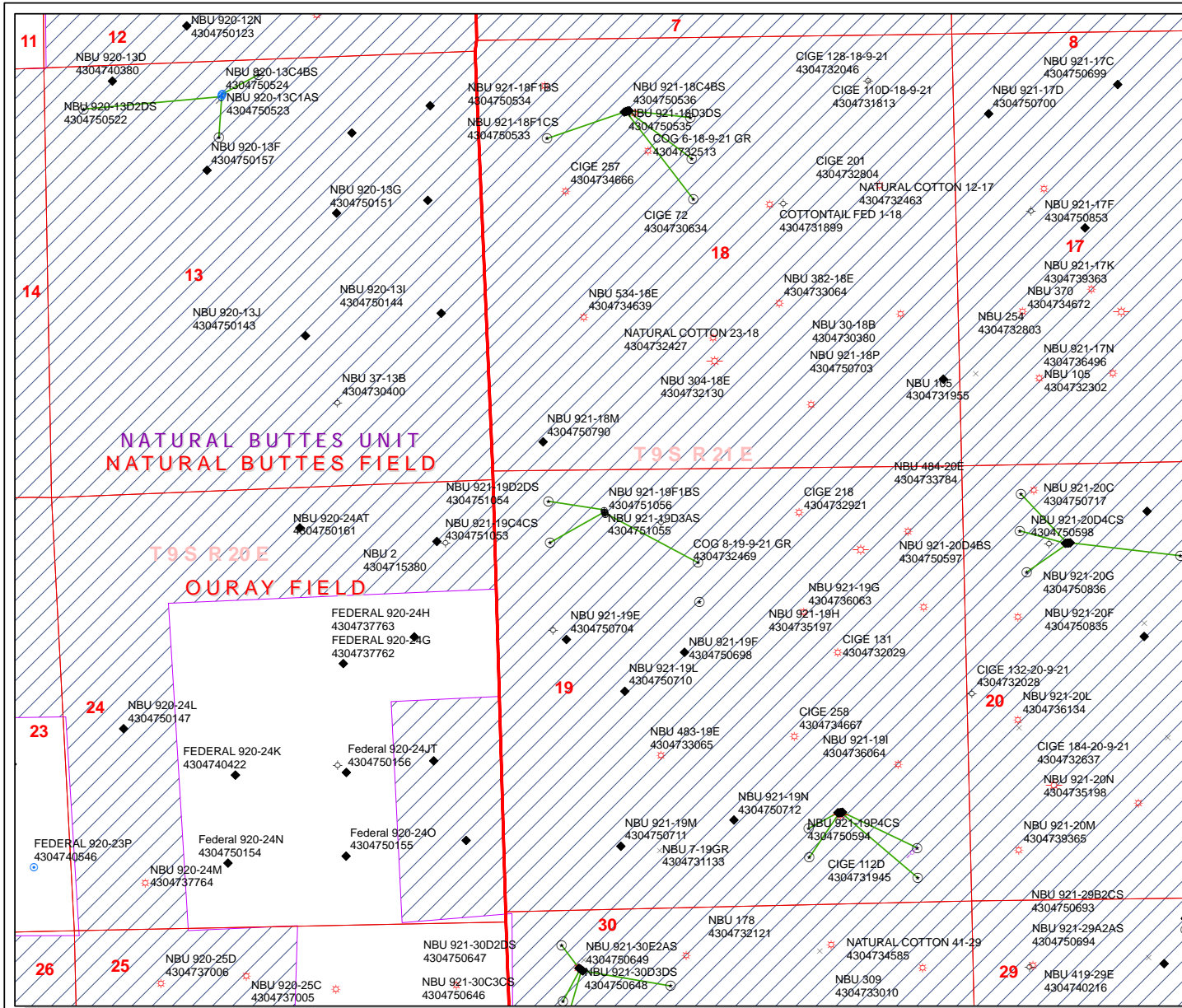
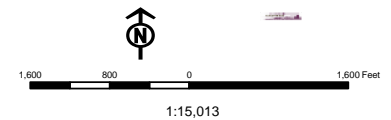
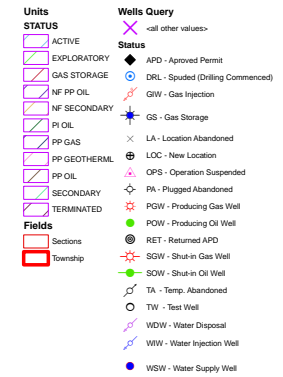
Township 09.0 S Range 21.0 E Section 19

Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:

Map Produced by Diana Mason



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

April 19, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

43-047-51039	NBU 920-210	Sec 21 T09S R20E 0054 FSL 1652 FEL
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43-047-51042	NBU 920-22M4BS	Sec 22 T09S R20E 1173 FSL 2388 FWL
	BHL	Sec 22 T09S R20E 0545 FSL 0900 FWL

43-047-51053	NBU 921-19C4CS	Sec 19 T09S R21E 0521 FNL 1364 FWL
	BHL	Sec 19 T09S R21E 1137 FNL 2485 FWL

43-047-51054	NBU 921-19D2DS	Sec 19 T09S R21E 0482 FNL 1356 FWL
	BHL	Sec 19 T09S R21E 0365 FNL 0680 FWL

43-047-51055	NBU 921-19D3AS	Sec 19 T09S R21E 0502 FNL 1360 FWL
	BHL	Sec 19 T09S R21E 0872 FNL 0680 FWL

43-047-51056	NBU 921-19F1BS	Sec 19 T09S R21E 0541 FNL 1368 FWL
	BHL	Sec 19 T09S R21E 1623 FNL 2485 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:4-19-10

WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 4/9/2010

API NO. ASSIGNED: 43047510540000

WELL NAME: NBU 921-19D2DS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NWNW 19 090S 210E

Permit Tech Review: ☒

SURFACE: 0482 FNL 1356 FWL

Engineering Review: ☒

BOTTOM: 0365 FNL 0680 FWL

Geology Review: ☒

COUNTY: UINTAH

LATITUDE: 40.02746

LONGITUDE: -109.59994

UTM SURF EASTINGS: 619466.00

NORTHINGS: 4431534.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 0581

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - WYB000291

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☒ **Intent to Commingle**

Commingle Approved

LOCATION AND SITING:

☐ **R649-2-3.**

Unit: NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

Board Cause No: Cause 173-14

Effective Date: 12/2/1999

Siting: 460' Fr U Bdry & Uncommitted Tracts

☒ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingle - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 921-19D2DS
API Well Number: 43047510540000
Lease Number: UTU 0581
Surface Owner: INDIAN
Approval Date: 5/3/2010

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingling:

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

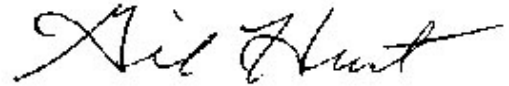
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, cursive script.

Gil Hunt
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-19D2DS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0482 FNL 1356 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 19 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047510540000
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 5/3/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.		
Approved by the Utah Division of Oil, Gas and Mining Date: 04/14/2011 By:		
NAME (PLEASE PRINT) Andy Lytle		PHONE NUMBER 720 929-6100
SIGNATURE N/A		TITLE Regulatory Analyst
DATE 4/7/2011		



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047510540000

API: 43047510540000

Well Name: NBU 921-19D2DS

Location: 0482 FNL 1356 FWL QTR NWNW SEC 19 TWP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 5/3/2010

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Andy Lytle

Date: 4/7/2011

Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED Apr. 07, 2011

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APR 09 2010

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

APD PMT RCVD

APR 15 2010

BLM VFO

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0581
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE		7. If Unit or CA Agreement, Name and No. UTU63047A
Contact: DANIELLE PIERNOT Email: Danielle.Piernot@anadarko.com		8. Lease Name and Well No. NBU 921-19D2DS
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156	9. API Well No. 43-047-51054
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface Lot 1 482FNL 1356FWL 40.02747 N Lat, 109.60068 W Lon At proposed prod. zone Lot 1 365FNL 680FWL 40.02778 N Lat, 109.60310 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 11 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 19 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 365 FEET	16. No. of Acres in Lease 2399.60	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 510 FEET	19. Proposed Depth 10582 MD 10463 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4794 GL	22. Approximate date work will start 05/25/2010	17. Spacing Unit dedicated to this well
20. BLM/BIA Bond No. on file WYB000291		23. Estimated duration 60-90 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156	Date 04/09/2010
Title REGULATORY ANALYST		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date MAY 09 2011
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED

MAY 16 2011

Additional Operator Remarks (see next page)

NOTICE OF APPROVAL Electronic Submission #84503 verified by the BLM Well Information System DIV. OF OIL, GAS & MINING
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal
Committed to AFMSS for processing by ROBIN R. HANSEN on 04/09/2010 (10RRH0198AE)

CONDITIONS OF APPROVAL ATTACHED

UDOGM

NOS
AFMSS# 10RRH0198AE

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Kerr McGee Oil & Gas Onshore LP
Well No: NBU 921-19D2DS
API No: 43-047-51054

Location:
Lease No:
Agreement:

Lot 1, Sec. 19, T9S R21E
UTU-0581
Natural Buttes

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Construction Activity
(Notify Ute Tribe Energy & Minerals
Dept. and BLM Environmental
Scientist)

- The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.

Construction Completion
(Notify Ute Tribe Energy & Minerals
Dept. and BLM Environmental
Scientist)

- Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.

Spud Notice
(Notify BLM Petroleum Engineer)

- Twenty-Four (24) hours prior to spudding the well.

Casing String & Cementing
(Notify BLM Supv. Petroleum Tech.)

- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut_vn_opreport@blm.gov.

BOP & Related Equipment Tests
(Notify BLM Supv. Petroleum Tech.)

- Twenty-Four (24) hours prior to initiating pressure tests.

First Production Notice
(Notify BLM Petroleum Engineer)

- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

***SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)***

Site-Specific Conditions of Approval:

- Paint all facilities "Shadow Gray."
- Move the existing pipeline off the damage area of the well pad.
- Monitor construction operations by a permitted archaeologist. Erect a temporary fence around the site boundary to facilitate avoidance.
- Monitor during construction operations by a permitted paleontologist.
- Monitor construction operations by a permitted biologist to ensure avoidance of Uinta Basin hookless cactus.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002, a raptor survey should be conducted prior to expansion of the well pad or pipeline upgrade if construction would take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during a new survey, KMG should conduct its operations according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines. An active great horned owl nest must be offset by a distance of 0.25 mile during the nesting season from February 1 through September 30 (See Appendix D).
- If project construction operations are not initiated before June 16, 2010, KMG should conduct additional biological surveys in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus (See Appendix D) and conduct its operation according to its specifications.

BIA Standard Conditions of Approval:

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be used in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.
- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved

disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.

- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel should refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG should conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nest are identified during a new survey, KMG should conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D).
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).
- All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

**DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)**

SITE SPECIFIC DOWNHOLE COAs:

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person

making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.
- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in

order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-19D2DS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0482 FNL 1356 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 19 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047510540000
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 7/18/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests to change the total depth (TD) to include the Blackhawk formation, which is in the Mesaverde group for this well. In addition, Kerr-McGee respectfully requests approval in the well design, which includes hole and casing size changes. Please see the attached for additional details. Please contact the undersigned if you have any questions and/or comments. Thank you.		
NAME (PLEASE PRINT) Laura Abrams		PHONE NUMBER 720 929-6356
SIGNATURE N/A		TITLE Regulatory Analyst II
DATE 7/7/2011		FOR RECORD ONLY

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581			
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NAME (PLEASE PRINT) Laura Abrams		PHONE NUMBER 720 929-6356			
SIGNATURE N/A		TITLE Regulatory Analyst II			
DATE 7/7/2011					

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 921-19D2DS**

Surface:	482 FNL / 1356 FWL	NWNW	LOT 1
BHL:	365 FNL / 680 FWL	NWNW	LOT 1

Section 19 T9S R21E

Unitah County, Utah
Mineral Lease: UTU-0581

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1682	
Birds Nest	1950	Water
Mahogany	2333	Water
Wasatch	5145	Gas
Mesaverde	8195	Gas
MVU2	9181	Gas
MVL1	9732	Gas
Sego	10490	Gas
Castlegate	10632	Gas
MN5	10895	Gas
TVD	11495	
TD	11589	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 11495' TVD, approximately equals
7,639 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 5,110 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press. (MASP) = (Pore Pressure at next csg point-

(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

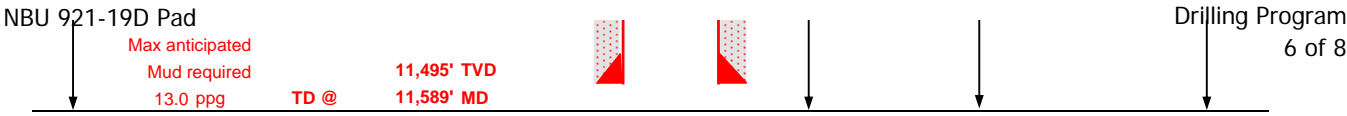
Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. **Other Information:**

Please refer to the attached Drilling Program.



NBU 921-19D Pad

Drilling Program
7 of 8

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	BTC
								TENSION	
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,780	28.00	IJ-55	LTC	1.95	1.44	5.11	N/A
						10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0 to 11,589	11.60	HCP-110	LTC or BTC	1.19	1.11	2.59	3.41

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2							
	LEAD	2,280'	65/35 Poz + 6% Gel + 10 pps gilsonite	210	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,639'	Premium Lite II +0.25 pps	350	20%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,950'	50/50 Poz/G + 10% salt + 2% gel	1,640	35%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

Nick Spence / Danny Showers

DATE:

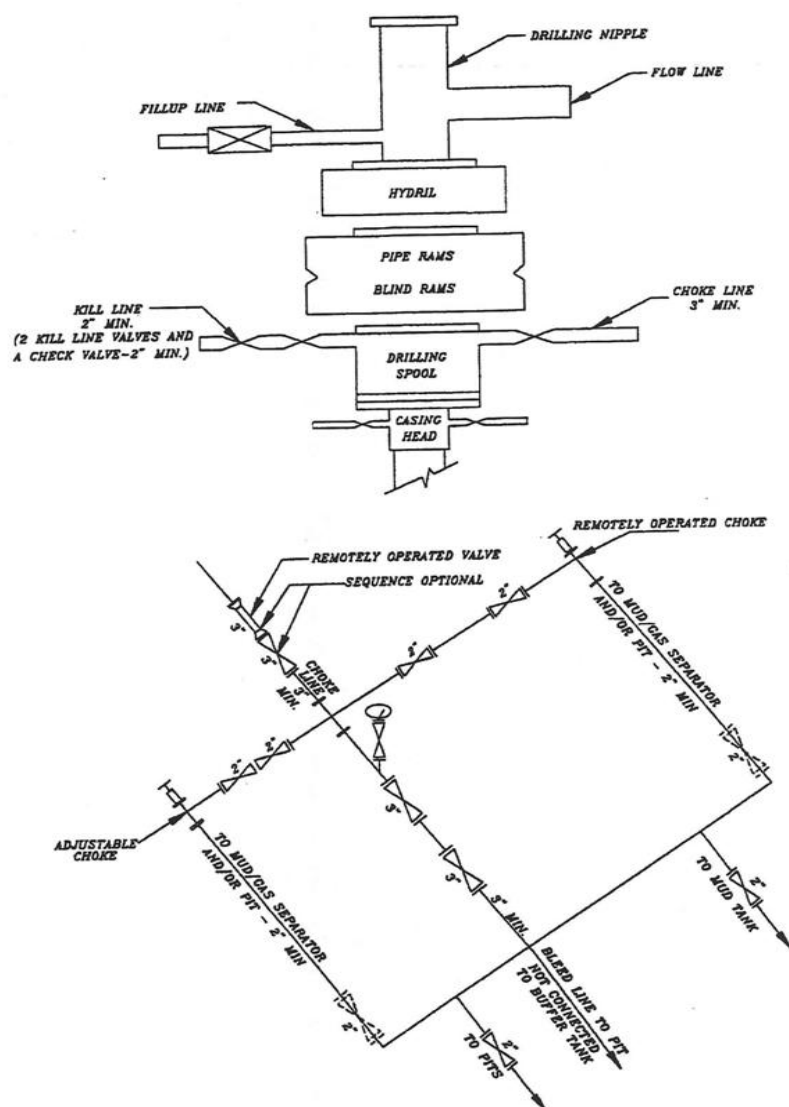
DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

DATE:

RECEIVED Jul. 07, 2011

NBU 921-19D Pad

Drilling Program
8 of 8**EXHIBIT A**
NBU 921-19D2DS**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
Well Name/Number NBU 921-19D2DS
Qtr/Qtr NW/NW Section 19 Township 9S Range 21E
Lease Serial Number UTU-0581
API Number 4304751054

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 07/27/2011 0800 HRS AM ☒ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

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JUL 26 2011

DIR. OF OIL, GAS & MINING

Date/Time 08/03/2011 0800 HRS AM ☒ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT
KENNY GATHINGS AT 435.781.7048 FOR MORE

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078 Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751054	NBU 921-19D2DS		NWNW	19	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	<u>7/27/2011</u>		<u>8/4/11</u>		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSTMVD</u> SPUD WELL ON 07/27/2011 AT 0900 HRS <u>BHL = NWNW</u>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751055	NBU 921-19D3AS		NWNW	19	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	<u>7/28/2011</u>		<u>8/4/11</u>		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSTMVD</u> SPUD WELL ON 07/28/2011 AT 1400 HRS. <u>BHL = NWNW</u>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751053	NBU 921-19C4CS		NWNW	19	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	<u>7/29/2011</u>		<u>8/4/11</u>		
Comments: MIRU PETE MARTIN BUCKET RIG. <u>WSTMVD</u> SPUD WELL ON 07/29/2011 AT 1200 HRS. <u>BHL = NENW</u>							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

8/3/2011

Date

(5/2000)

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AUG 03 2011

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 921-19D2DS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0482 FNL 1356 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 19 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047510540000
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/2/2011	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON JULY 30, 2011. DRILLED SURFACE HOLE TO 2910'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Andy Lytle		PHONE NUMBER 720 929-6100
SIGNATURE N/A		TITLE Regulatory Analyst
		DATE 8/3/2011

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 7/27/2011	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
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	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> OPERATOR CHANGE	
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	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
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	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER	
	OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 07/27/2011 AT 0900 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 8/3/2011	

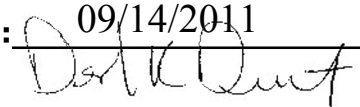
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PHONE NUMBER: 720 929-6515 Ext		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 8/30/2011 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. This sundry is being submitted on behalf of the Natural Buttes Unit. Kerr-McGee Oil and Gas, LP requests authorization to drill the above captioned well with a closed-loop system. Please see the attached Exhibit A. Thank you.		
Accepted by the Utah Division of Oil, Gas and Mining		Date: 09/14/2011 By: 
NAME (PLEASE PRINT) Laura Abrams		PHONE NUMBER 720 929-6356
SIGNATURE N/A		TITLE Regulatory Analyst II
DATE 8/30/2011		

Exhibit A

Kerr-McGee Oil and Gas Onshore, LP respectfully requests authorization to drill the above captioned well utilizing a closed-loop mud system.

The drilling pit was constructed per the requirements of the Application for Permit to Drill; therefore the liner will be temporarily removed from the pit, the pit will be partially backfilled, and liner will be re-set. All other aspects of the pit shall remain the same.

Equipment for the closed-loop system will be as follows:

- 2 HS-3400 Centrifuge
- 1 Conical Clarifying Tank
- 1 Polymer/Flocculation Unit
- 1 Catch Tank for Solids
- 1 4x3 Centrifugal Pump

Storage Tank Roll (6 frac tanks - 4 water, 2 mud):

- 1 4x3 Centrifugal Pump
- 1 Manifold
- 8 3-inch hose/20 foot section x qty 8 (estimate)
- 8 4-inch hose/20 foot section x qty 8 (estimate)

A 250 KW Generator (est. 20 gal/hr fuel rate) and a Power Distribution Panel will be utilized if deemed necessary.

Carol Daniels - NOTIFICATION PROD CASING NBU 921-19D2DS

TOPS R21E 541 43-047-51054

From: "Anadarko - H&P 298" <hp298@gesmail.net>
To: <caroldaniels@utah.gov>
Date: 10/3/2011 8:45 AM
Subject: NOTIFICATION PROD CASING NBU 921-19D2DS

ON NBU 921-19D2DS WE WILL BE RUNNING 41/2,P-110,11.6# BT&C CASING TO 11,600 FT,ON H&P 298 ON TUESDAY 10/4/2011 @ 8-11 PM

THANKS,JIM

RECEIVED

OCT 04 2011

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9																														
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TYPE OF SUBMISSION <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 10/6/2011	TYPE OF ACTION <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> ACIDIZE</td> <td><input type="checkbox"/> ALTER CASING</td> <td><input type="checkbox"/> CASING REPAIR</td> </tr> <tr> <td><input type="checkbox"/> CHANGE TO PREVIOUS PLANS</td> <td><input type="checkbox"/> CHANGE TUBING</td> <td><input type="checkbox"/> CHANGE WELL NAME</td> </tr> <tr> <td><input type="checkbox"/> CHANGE WELL STATUS</td> <td><input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS</td> <td><input type="checkbox"/> CONVERT WELL TYPE</td> </tr> <tr> <td><input type="checkbox"/> DEEPEN</td> <td><input type="checkbox"/> FRACTURE TREAT</td> <td><input type="checkbox"/> NEW CONSTRUCTION</td> </tr> <tr> <td><input type="checkbox"/> OPERATOR CHANGE</td> <td><input type="checkbox"/> PLUG AND ABANDON</td> <td><input type="checkbox"/> PLUG BACK</td> </tr> <tr> <td><input type="checkbox"/> PRODUCTION START OR RESUME</td> <td><input type="checkbox"/> RECLAMATION OF WELL SITE</td> <td><input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION</td> </tr> <tr> <td><input type="checkbox"/> REPERFORATE CURRENT FORMATION</td> <td><input type="checkbox"/> SIDETRACK TO REPAIR WELL</td> <td><input type="checkbox"/> TEMPORARY ABANDON</td> </tr> <tr> <td><input type="checkbox"/> TUBING REPAIR</td> <td><input type="checkbox"/> VENT OR FLARE</td> <td><input type="checkbox"/> WATER DISPOSAL</td> </tr> <tr> <td><input type="checkbox"/> WATER SHUTOFF</td> <td><input type="checkbox"/> SI TA STATUS EXTENSION</td> <td><input type="checkbox"/> APD EXTENSION</td> </tr> <tr> <td><input type="checkbox"/> WILDCAT WELL DETERMINATION</td> <td><input type="checkbox"/> OTHER</td> <td>OTHER: <input style="width: 100px;" type="text"/></td> </tr> </table>		<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU ROTARY RIG. FINISHED DRILLING FROM 2910' TO 11,614' ON OCTOBER 4, 2011. RAN 4-1/2" 11.6# P-110 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED H&P RIG 298 ON OCTOBER 6, 2011 @ 10:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.																																
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY																																
NAME (PLEASE PRINT) Jaime Scharnowske		PHONE NUMBER 720 929-6304																														
SIGNATURE N/A		TITLE Regulatory Analyst																														
DATE 10/10/2011																																

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4. LOCATION OF WELL FOOTAGES AT SURFACE: 0482 FNL 1356 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 19 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047510540000			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
TYPE OF SUBMISSION <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/15/2011	TYPE OF ACTION <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/> </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 12/15/2011 AT 1630 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.					
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY					
NAME (PLEASE PRINT) Sheila Wopsock		PHONE NUMBER 435 781-7024			
SIGNATURE N/A		TITLE Regulatory Analyst			
DATE 12/16/2011					

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
UTU0581

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.
UTU63047A

2. Name of Operator
KERR MCGEE OIL & GAS ONSHORE, Mail: JAIME.SCHARNOWSKE@ANADARKO.COM

8. Lease Name and Well No.
NBU 921-19D2DS

3. Address
PO BOX 173779
DENVER, CO 80217

3a. Phone No. (include area code)
Ph: 720-929-6304

9. API Well No.
43-047-51054

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface NWNW 482FNL 1356FWL 40.027473 N Lat, 109.600690 W Lon
At top prod interval reported below NWNW 349FNL 613FWL

10. Field and Pool, or Exploratory
NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey
or Area Sec 19 T9S R21E Mer SLB

12. County or Parish
UINTAH

13. State
UT

14. Date Spudded
07/27/2011

15. Date T.D. Reached
10/04/2011

16. Date Completed
☐ D & A ☒ Ready to Prod.
12/15/2011

17. Elevations (DF, KB, RT, GL)*
4789 GL

18. Total Depth: MD 11614
TVD 11606

19. Plug Back T.D.: MD 11578
TVD 11570

20. Depth Bridge Plug Set: MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
CBL/CM/GR/CCL-BHV-SD/DSN/ACTR

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	2911		505		0	
7.875	4.500 P-110	11.6	0	11601		2071		5070	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	11010							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	8482	11440	8482 TO 11440	0.360	242	OPEN
B) WSMVD						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
8482 TO 11440	PUMP 19,687 BBLs SLICK H2O & 411,788 LBS 30/50 OTTAWA SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
12/15/2011	12/19/2011	24	→	0.0	3375.0	720.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	2679	3588.0	→	0	3375	720		PGW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #129991 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

RECEIVED
FEB 07 2012
DIV. OF OIL, GAS & MINING

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1719 2037 2556 5196 8331

32. Additional remarks (include plugging procedure):

The first 210' of the surface hole was drilled with a 12 ?? bit. The remainder of surface hole was drilled with an 11? bit. Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7. Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #129991 Verified by the BLM Well Information System.
For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal

Name (please print) JAIME L. SCHARNOWSKETitle REGULATORY ANALYST

Signature _____ (Electronic Submission)

Date 02/02/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011		Spud Date: 7/31/2011	
Project: UTAH-UINTAH		Site: NBU 921-19D PAD		Rig Name No: PROPETRO 11/11, H&P 298/298	
Event: DRILLING		Start Date: 7/10/2011		End Date: 10/6/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/30/2011	15:00 - 0:00	9.00	DRLSUR	01	A	P		MOVE RIG TO NBU 921-19D PAD
7/31/2011	0:00 - 7:30	7.50	DRLSUR	01	B	P		RIG UP ON WELL # 1/4
	7:30 - 8:30	1.00	DRLSUR	02	C	P		SPUD WELL DRILL 12.25" HOLE F/ 40' - 210' ROT
	8:30 - 10:00	1.50	DRLSUR	06	A	P		45-55 DHR 96 GPM 600 WOB 8-20 TOOH PICK UP 11" BIT AND DIRECTIONAL TOOLS AND ORIENT TOOLS TO MUD MOTOR
	10:00 - 15:00	5.00	DRLSUR	08	A	Z		CHANGE OUT 4" VALVE ON PUMPS
	15:00 - 15:30	0.50	DRLSUR	06	A	P		TIH WITH 11" BIT AND MUD MOTOR
	15:30 - 18:30	3.00	DRLSUR	08	A	Z		CHANGE OUT HYDRAULIC HOSE
	18:30 - 19:30	1.00	DRLSUR	06	A	P		FINISH TIH
	19:30 - 0:00	4.50	DRLSUR	02	C	P		DRILL 11" HOLE F/ 210' - 900' WOB 20-22 ROT 45-55 DHR 96 GPM 600 UP 60 DN 50 ROT 55 LAST SURVEY 11.88 DEG 283.64 AZI
8/1/2011	0:00 - 0:00	24.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 900' - 2730' WOB 20-22 ROT 45-55 DHR 96 GPM 600 UP 90 DN 60 ROT 70 LAST SURVEY 15.25 DEG 279.64 AZI
8/2/2011	0:00 - 2:30	2.50	DRLSUR	02	C	P		DRILL 11" HOLE F/ 2730' - 2910' WOB 20-22 ROT 45-55 DHR 96 GPM 600 UP 90 DN 60 ROT 70 LAST SURVEY 15.25 DEG 279.64 AZI
	2:30 - 4:00	1.50	DRLSUR	05	A	P		CIRCULATE AND CONDITION MUD FOR TRIP OUT/CASING
	4:00 - 8:30	4.50	DRLSUR	06	E	P		TOOH
	8:30 - 14:00	5.50	DRLSUR	08	A	Z		WAIT ON NEW FORKLIFT FROM JD FIELD SERVICES, BROKE CARRIER LOST A FORK
	14:00 - 18:30	4.50	DRLSUR	12	A	P		HOLD SAFETY MEETING, RUN FLOAT SHOE, SHOE JNT, BAFFLE & 67 JNTS 8 5/8" 28# J-55 LT&C CSG W/ THE SHOE SET @2889' & THE BAFFLE @ 22842', RAN 6 CENTRALIZER'S
	18:30 - 21:30	3.00	DRLSUR	12	B	P		HOLD SAFETY MEETING. PSI TEST TO 1500 PSI. PUMP 30 BBLS OF 8.4# H2O AHEAD. FULL CIRC. PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. FULL CIRC. PUMP 230 SX(156.4 BBLS) 11# 3.82 YIELD LEAD CEMENT, PUMP 175 SX (36 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). DROP PLUG ON FLY AND DISPLACE W/177.1 BBLS OF 8.4# H2O.FULL CIRC. THRU OUT JOB,FINAL LIFT PRESS. 700 PSI, BUMP PLUG AND HOLD 1200 PSI FOR 5 MIN. FLOAT HELD,30 BBLS LEAD CEMENT TO SURF.,CEMENT FELL BACK, TOP OUT W/100 SKS 15.8 PPG CLASS "G" CEMENT W/4% CACL2 & 1/4# /SK FLOCELE, W/ CEMENT TO SURF RELEASE RIG 21:30
9/21/2011	18:00 - 0:00	6.00	RDMO	01	A	P		RD / RT PREPARE FOR RIG MOVE
9/22/2011	0:00 - 6:00	6.00	SUSPEN	21	C	P		W.O. DAYLIGHT
	6:00 - 18:00	12.00	SUSPEN	01	A	P		RD MIRU 30% R/U / 20% LEFT ON OLD LOCATION / RW JONES 9 TRUCKS / 2 FORK LIFTS / 17 PERSONNEL / J&C CRANE 1-CRANE 5 PERSONNEL / H&P 15 PERSONNEL
	18:00 - 0:00	6.00	SUSPEN	21	C	P		W.O. DAYLIGHT

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011		Spud Date: 7/31/2011	
Project: UTAH-UINTAH		Site: NBU 921-19D PAD		Rig Name No: PROPETRO 11/11, H&P 298/298	
Event: DRILLING		Start Date: 7/10/2011		End Date: 10/6/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/23/2011	0:00 - 6:00	6.00	MIRU	21	C	P		W.O.DAYLIGHTS
	6:00 - 18:00	12.00	MIRU	01	B	P		MIRU 75% R/U / 100% OFF OLD LOCATION RW JONES 6 TRUCKS / 2 FORK LIFTS 12 PERSONNEL / J&C CRANE - 1 CRANE 5 PERSONNEL / H&P CREW 15 PERSONNEL / NOV 3 PERSONNEL / STRATA 5 PERSONNEL
9/24/2011	18:00 - 0:00	6.00	MIRU	21	C	P		W.O. DAYLIGHTS
	0:00 - 6:00	6.00	MIRU	21	C	P		W.O.DAYLIGHT
	6:00 - 23:00	17.00	MIRU	01	B	P		RU / RT RW JONES 2 TRUCKS 2 FORK LIFTS 6 PERSONNEL J&C CRANE 1-CRANE 5 PERSONNEL / H&P 14 PERSONNEL / STRAT 5 PERSONNEL / NOV 4 PERSONNEL / DRK IN AIR @ 07:30 CONTINUE TO RU / RT / RIG 100% SET IN / J&C CRANE OFF LOCATION @ 11:00 AM / RW JONES OFF LOCATION @ 13:30 NU BOP'S
9/25/2011	23:00 - 0:00	1.00	PRPSPD	14	A	P		NU BOP SURFACE EQUIPMENT
	0:00 - 6:00	6.00	PRPSPD	14	A	P		NU STRATA PRESSURE CONTROL & CHOKE SYSTEM
	6:00 - 15:00	9.00	PRPSPD	14	A	P		TEST BOP & EQUIPMENT AS PER PROGRAM 250 LOW 5000 HIGH / ANNULAR 250/2500 PSI STRATA PRESSURE CONTROL EQUIPMENT 250/3000 PSI / CSG FOR 30 MINS 1500 PSI
	15:00 - 21:00	6.00	PRPSPD	15	A	P		INSTALL WEAR BUSHING
9/26/2011	21:00 - 21:30	0.50	PRPSPD	14	B	P		RIG SERVICE / CHANGE OUT SAVER SUB & DIES ON TDS GRABBS
	21:30 - 0:00	2.50	PRPSPD	07	C	P		PRE SPUD INSPECTION
	0:00 - 0:30	0.50	PRPSPD	23		P		P/U & MU DIRECTIONAL BHA # 1 W/ WEATHERFORD, SCRIBE, ORIENTATE SAME
	0:30 - 2:00	1.50	PRPSPD	06	A	P		PJSM RU FRANKS PU MACHINE PU DRILL PIPE F/ 105' TO 2,810' RD SAME
	2:00 - 12:00	10.00	PRPSPD	06	A	P		CHECK & LEVEL DERRICK / CENETER BOP INSTALL ROT RUBBERS
	12:00 - 13:30	1.50	PRPSPD	07	B	P		DRILL CMT & SHOE TRACK F/ 2,810' TO 2,911' CLEAN RAT HOLE TO 2,932'
	13:30 - 15:00	1.50	PRPSPD	02	F	P		DRILL F/ 2,932' TO 2,994'
	15:00 - 15:30	0.50	DRLPRO	02	C	P		SHAKERS BLINDING OFF C/O SHAKER SCREENS
	15:30 - 16:00	0.50	DRLPRO	22	O	Z		SERVICE RIG MEANWHILE CONTINUE TO ADJUST SHAKER SCREENS
	16:00 - 16:30	0.50	DRLPRO	07	A	P		TROUBLE SHOOT & REPAIR ENCODER TO DRAW WORKS
	16:30 - 19:30	3.00	DRLPRO	08	A	Z		DRILL/ SLIDE/ SURVEY F/ 2,994' TO 3,086' = 92' @ 92 FPH / / WOB 15K-20K / TOP DRIVE RPM 60 / PUMP 100/120 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 1450/1125 PSI / MUD MOTOR RPM 114 / PU/SO/ROT WT 112/90/98 TORQUE ON/OFF BOTTOM 7K/3K
	19:30 - 20:30	1.00	DRLPRO	02	D	P		TROUBLE SHOOT ELECTRICAL PROBLEM WITH DRAW WORKS (RESISTOR GRID)
	20:30 - 0:00	3.50	DRLPRO	08	A	Z		TROUBLE SHOOT ELECTRICAL POWER TO DRAW WORKS REPAIR ELECTRIC CABLE TO MUD PUMP #1 & PCL & RESISTOR GRID TO DRAW WORKS
9/27/2011	0:00 - 5:00	5.00	DRLPRO	08	A	Z		

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011		Spud Date: 7/31/2011	
Project: UTAH-UINTAH		Site: NBU 921-19D PAD			Rig Name No: PROPETRO 11/11, H&P 298/298
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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	5:00 - 0:00	19.00	DRLPRO	02	D	P		DRILL/ SLIDE/ SURVEY F/ 3,086' TO 5,165' = 2,097' '@ 110.36 FPH // WOB 15K-20K / TOP DRIVE RPM 40-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 1525/1300 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 158/114/130 TORQUE ON/OFF BOTTOM 8K/4K / SLIDE 150' IN 120 MIN 7% OF FOOTAGE DRILLED 11% OF HRS DRILLED / MUD WT 8.6PPG VIS 27
9/28/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL/ SLIDE/ SURVEY F/ 5,165' TO 5,775' = 610' @ 101.66 FPH // WOB 15K-20K / TOP DRIVE RPM 40-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 1525/1300 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 158/114/130 TORQUE ON/OFF BOTTOM 8K/4K / SLIDE 0' IN 0 MIN 0% OF FOOTAGE DRILLED 0% OF HRS DRILLED / MUD WT 8.6PPG VIS 27
	6:00 - 15:00	9.00	DRLPRO	02	D	P		DRILL/ SLIDE/ SURVEY F/5,775' TO 6,680' = 905' @ 100.55 FPH // WOB 16K-23K / TOP DRIVE RPM 40-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2115/2000 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 186/130/142 TORQUE ON/OFF BOTTOM 13K/12 K / SLIDE 20' IN 15 MIN 2% OF FOOTAGE DRILLED 2% OF HRS DRILLED / MUD WT 9.0 PPG VIS 30
	15:00 - 15:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL/ / SURVEY F/6,680' TO 7,445' = 765' @ 90 FPH // WOB 16K-23K / TOP DRIVE RPM 40-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2050/1800 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 216/132/167 TORQUE ON/OFF BOTTOM 16K/14 K / / MUD WT 8.7 VIS 30 / 10-20' FLARE
9/29/2011	0:00 - 10:30	10.50	DRLPRO	02	D	P		DRILL/ / SURVEY F/7,445' TO 8,102' = 657' @ 62.5 FPH // WOB 16K-23K / TOP DRIVE RPM 40-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2050/1800 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 216/132/167 TORQUE ON/OFF BOTTOM 16K/14 K / / MUD WT 8.6+ VIS 28 / 5-15' FLARE
	10:30 - 11:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	11:00 - 0:00	13.00	DRLPRO	02	D	P		DRILL/ / SURVEY F/8,102' TO 8,760' = 658' @ 50.6 FPH // WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2125/1900 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 236/154/188 TORQUE ON/OFF BOTTOM 18K/16 K / SLIDE 20' IN 45 MIN 3% OF FOOTAGE DRILLED 5% OF HRS DRILLED / MUD WT 8.8 VIS 29 / 10-12' FLARE
9/30/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL / SURVEY F/8,760' TO 9,020' = 260' @ 43.3 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2200/1900 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 246/154/190 TORQUE ON/OFF BOTTOM 18K/17 K / MUD WT 8.9 VIS 29 / 5-15' FLARE

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011		Spud Date: 7/31/2011	
Project: UTAH-UINTAH		Site: NBU 921-19D PAD			Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING		Start Date: 7/10/2011		End Date: 10/6/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)			UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/1/2011	6:00 - 15:00	9.00	DRLPRO	02	D	P		DRILL / SURVEY F/9,020' TO 9,420=400 '@ 44.4 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2450/2250 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 250/160/196 TORQUE ON/OFF BOTTOM 18K/12 K / MUD WT 9.4 VIS 36 / 5-15' FLARE RIG SERVICE
	15:00 - 15:30	0.50	DRLPRO	02	D	P		
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL / SURVEY F/9,420' TO 9,745=325 '@ 40.6 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2450/2300 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 260/158/199 TORQUE ON/OFF BOTTOM 19K/18 K / MUD WT 9.5 VIS 36 / 8-10' FLARE
	0:00 - 4:00	4.00	DRLPRO	02	D	P		DRILL / SURVEY F/9,745 TO 9,860=85 '@ 21.5 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2450/2300 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 260/158/199 TORQUE ON/OFF BOTTOM 19K/18 K / MUD WT 9.6 VIS 37 / 8-10' FLARE
	4:00 - 4:30	0.50	DRLPRO	08	B	Z		RIG REPAIR/STOP PUMPS / REPLACE PULSATION DAMPNER TUBE, ON #1MUD PUMP, THAT WAS LEAKING
	4:30 - 13:30	9.00	DRLPRO	02	D	P		DRILL / SURVEY F/9,860 TO 10,134=274 '@ 30.4 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2970/2720 PSI / MUD MOTOR RPM 132 / PU/SO/ROT WT 245/160/204 TORQUE ON/OFF BOTTOM 16K/18 K / MUD WT 10.1 VIS 37 / 8-10' FLARE
	13:30 - 15:00	1.50	DRLPRO	05	C	P		CCH F/ BIT TRIP/ PUMP SWEEPS
	15:00 - 21:00	6.00	DRLPRO	06	A	P		TOH, SPOT 100 BBLS 11.5 MUD ON BTM / TOH FLOW CHECK @ CSG SHOE / HOLE GOOD NO PROBLEMS. TOH/PULL STRATA ROTHEAD/TOH W/ BHA
	21:00 - 22:00	1.00	DRLPRO	06	A	P		CHANGE OUT M MTR & BIT, INSTALL MWD, SCRIBE & SURFACE TEST TOOLS
	22:00 - 0:00	2.00	DRLPRO	06	A	P		TIH, W BHA CHECK DERRICK FOR LEVEL, INSTALL ROT HEAD, BREAK CIRC @ SHOE, CIH
10/2/2011	0:00 - 4:00	4.00	DRLPRO	06	A	P		TIH FILL PIPE @ 6800, TIGHT SPOTS 4000 TO 4500 , REAM THRU TIGHT SPOT @ 7488-7494, CIH TIGHT @ 7742, REAM THRU TIGHT SPOT 8790-8792, CIH TO 10,009'
	4:00 - 4:30	0.50	DRLPRO	03	D	P		W&R 125' TO BTM 3' FILL
	4:30 - 6:00	1.50	DRLPRO	02	D	P		DRILL / SURVEY F/10,134 TO 10,210=76 '@ 50.6 FPH / WOB 16K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2550/2300 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 260/160/207 TORQUE ON/OFF BOTTOM 19K/18 K / MUD WT 10.5 VIS 38 / BTMS UP GAS 3055 UNITS / 30' FLARE

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011		Spud Date: 7/31/2011	
Project: UTAH-UINTAH		Site: NBU 921-19D PAD			Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING		Start Date: 7/10/2011		End Date: 10/6/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)			UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/3/2011	6:00 - 15:30	9.50	DRLPRO	02	D	P		DRILL / SURVEY F/10,210 TO ,10,649=439 '@ 46.2 FPH / WOB 16K-22K / TOP DRIVE RPM 35-60 / PUMP 120 SPM = 550 GPM / PUMP PRESSURE ON/OFF BOTTOM 2950/2725PSI / MUD MOTOR RPM 88 / PU/SO/ROT WT 260/160/207 TORQUE ON/OFF BOTTOM 19K/18 K / MUD WT 10.7 VIS 38
	15:30 - 16:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILL / SURVEY F/10,649 TO ,10,835=186 '@ 23.3 FPH / WOB 16K-22K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2700/2300 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 260/160/207 TORQUE ON/OFF BOTTOM 19K/18 K / MUD WT 10.8 VIS 39
	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL F/10,835 TO ,10,940=105 '@ 17.5 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2750/2600 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 279/174/217 TORQUE ON/OFF BOTTOM 19K/18 K / MUD WT 10.9 VIS 40 / NO MUD LOSS / WEATHERFORD DIR HAVING TROUBLE RETRIEVING SURVEYS WEAK SIGNAL
	6:00 - 13:00	7.00	DRLPRO	02	D	P		DRILL F/10,940 TO ,11,122=182 '@ 26 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2850/2700 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 279/174/217 TORQUE ON/OFF BOTTOM 17K/13 K / MUD WT 10.9 VIS 40 / NO MUD LOSS
	13:00 - 14:00	1.00	DRLPRO	07	C	P		REPLACE ROTATING HEAD RUBBER
	14:00 - 18:00	4.00	DRLPRO	02	D	P		DRILL F/11,122 TO ,11,216=94 '@ 23.5 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 110 SPM = 495 GPM / PUMP PRESSURE ON/OFF BOTTOM 2850/2700 PSI / MUD MOTOR RPM 79 / PU/SO/ROT WT 279/174/217 TORQUE ON/OFF BOTTOM 17K/13 K / MUD WT 11.2 VIS 40 / NO MUD LOSS
	18:00 - 19:00	1.00	DRLPRO	22	L	Z		CHANGE OUT STRATA ROTATING HEAD BEARING ASSY DUE TO SEAL FAILURE
	19:00 - 0:00	5.00	DRLPRO	02	D	P		DRILL F/11,218 TO ,11,345=127 '@ 25.4 FPH / WOB 16K-25K / TOP DRIVE RPM 35-60 / PUMP 105 SPM = 472 GPM / PUMP PRESSURE ON/OFF BOTTOM 2950/2800 PSI / MUD MOTOR RPM 76 / PU/SO/ROT WT 274/176/221 TORQUE ON/OFF BOTTOM 20K/19 K / MUD WT 11.6 VIS 42 / NO MUD LOSS
	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL F/11,345 TO ,11,500=155 '@ 25.8 FPH / WOB 16K-25K / TOP DRIVE RPM 30-60 / PUMP 105 SPM = 472 GPM / PUMP PRESSURE ON/OFF BOTTOM 3000/2870 PSI / MUD MOTOR RPM 76 / PU/SO/ROT WT 274/182/223 TORQUE ON/OFF BOTTOM 20K/19 K / MUD WT 11.8VIS 44 / NO MUD LOSS
10/4/2011	6:00 - 10:00	4.00	DRLPRO	02	D	P		DRILL F/11,500 TO ,11,614 TD =114 '@ 28.5 FPH / WOB 16K-25K / TOP DRIVE RPM 30-60 / PUMP 105 SPM = 472 GPM / PUMP PRESSURE ON/OFF BOTTOM 3000/2870 PSI / MUD MOTOR RPM 76 / PU/SO/ROT WT 274/182/224 TORQUE ON/OFF BOTTOM 20K/19 K / MUD WT 12.1VIS 44 / LCM 3% NO MUD LOSS

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-19D2DS RED	Spud Conductor: 7/27/2011	Spud Date: 7/31/2011
Project: UTAH-UINTAH	Site: NBU 921-19D PAD	Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING	Start Date: 7/10/2011	End Date: 10/6/2011
Active Datum: RKB @4,815.00usft (above Mean Sea Level)		UWI: NWNW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/5/2011	10:00 - 11:30	1.50	DRLPRO	05	C	P		CCH, PUMP SWEEPS,MIX SLUG F/ WIPER TRIP
	11:30 - 16:30	5.00	DRLPRO	06	E	P		BACK BEAM OUT 10 STDS / PUMP SLUG, WIPER TRIP TO CSG SHOE / NO TIGHT SPOTS,HOLE GOOD,FLOW CHECK & FILL PIPE@ SHOE, RIG SERVICE
	16:30 - 17:00	0.50	DRLPRO	07	A	P		
	17:00 - 21:30	4.50	DRLPRO	06	E	P		TIH BREAK CIRC @ 5500, 8500 ,TIH, WASH 95' TO BTM ,NO FILL
	21:30 - 23:30	2.00	DRLPRO	05	C	P		CIRC & COND F/ LOGS/TRIP GAS 7000 U 2/10THS MUD CUT / NO FLARE
	23:30 - 0:00	0.50	EVALPR	06	B	P		TOH F/ LOGS,BACK REAM OUT 5 STDS
	0:00 - 6:00	6.00	EVALPR	06	B	P		PULL 5 STDS PUMP SLUG TOH F/ E-LOGS / NO PROBLEMS PULL MWD TOOL,BREAK BIT /FUNCT TEST PIPE & BLIND RAMS
	6:00 - 12:30	6.50	EVALPR	11	E	P		HSM W/ HALLIBURTON & RIG CREW/ R/U AND RUN TRIPLE COMBO / DRILLER TD 11,614 LOGGER TD 11,600 ,LOG OUT TO SURFACE R/D SAME
	12:30 - 13:30	1.00	CSG	14	B	P		PULL WEAR BUSHING,CHANGE TO 18' BAILS
	13:30 - 15:00	1.50	CSG	12	A	P		HSM W/ RIG CREW & FRANKS CASERS, RU CSG EQUIP
10/6/2011	15:00 - 0:00	9.00	CSG	12	C	P		M/U FLOAT EQUIP RUN 41/2 CSG CURRENTLY @ 10,750'.
	0:00 - 1:00	1.00	CSG	12	C	P		RUN 277 JTS P-110 11.6# BT&C 4.5 CASING + RELATED TOOLS / BREAKING CIRCULATION @ SELECTED INTERVALS / HOLDING CSG @ 11,600 FOR CIRC & CEMENTING
	1:00 - 2:30	1.50	CSG	05	D	P		CIRC CSG/ RD FRANKS CASERS
	2:30 - 5:30	3.00	CSG	12	E	P		SAFETY MEETING (REVIEW J.S.A.) M.I.R.U. BJ EQUIPMENT / TEST PUMPS & LINES TO 4,500 PSI / PUMP 5 BBLS H2O / 10 BBL (20 SKS) SCAVENGER @11.3 ppg 2.83 yield + 508 SX LEAD CEMENT @ 12.3 ppg (PREM LITE II + .25 pps CELLO FLAKE + 5 pps KOL SEAL + .05 lb/sx STATIC FREE + 10% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + .4 % R-3 + 241.9 BBLS FRESH WATER / (16.74 gal/sx, 2.12 yield) + 1563 SX TAIL @ 14.3 ppg (CLS G 50/50 POZ + 10% SALT + .05lbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE + 206.9 BBLS H2O / (5.90 gal/sx, 1.31 yield) / DROP PLUG & DISPLACE W/ 180 BBLS H2O + ADDITIVES / PLUG DOWN @ 0500 HOURS / FLOATS HELD W/ 2.5 BBLS H2O RETURNED TO INVENTORY/ GOOD CIRC THROUGHOUT W/ 20 BBLS LEAD TO PIT / LIFT PRESSURE @3,220 PSI / BUMP PRESSURE TO 3,880 PSI / TOP OF TAIL CEMENT CALCULATED @ 3879 / RIG DOWN CMT EQUIP/ CSG SHOE 11,600,FC @ 11,579/ TOP OF MKR JT MV 8,337 ,MKR JT WASATCH 4,825 / RD CEMENTERS
	5:30 - 8:00	2.50	CSG	14	A	P		FLUSH OUT BOP STACK,ND BOP,SET 41/2X11 CASING SLIPS W/ 105K,CUT OFF & LD LANDING JT
	8:00 - 10:00	2.00	CSG	01	E	P		PREP TO SKID,RIG RELEASED TO NBU 921-19D3AS @ 10:00 10/06/2011

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 921-19D2DS RED	Wellbore No.	OH
Well Name	NBU 921-19D2DS	Wellbore Name	NBU 921-19D2DS
Report No.	1	Report Date	12/1/2011
Project	UTAH-UINTAH	Site	NBU 921-19D PAD
Rig Name/No.	MILES 2/2	Event	COMPLETION
Start Date	12/1/2011	End Date	12/15/2011
Spud Date	7/31/2011	Active Datum	RKB @4,815.00usft (above Mean Sea Level)
UWI	NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0		

1.3 General

Contractor	CASED HOLE SOLUTIONS	Job Method	PERFORATE	Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	8,482.0 (usft)-11,440.0 (usft)	Start Date/Time	
No. of Intervals	48	End Date/Time	
Total Shots	242	Net Perforation Interval	76.00 (usft)
Avg Shot Density	3.18 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			8,482.0	8,483.0	3.00		0.360	EXP/	3.375	120.00			23.00 PRODUCTION	
														N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			8,527.0	8,528.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,539.0	8,540.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,586.0	8,588.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,630.0	8,632.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,669.0	8,691.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,816.0	8,818.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,874.0	8,876.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,891.0	8,892.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,929.0	8,930.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,038.0	9,040.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,080.0	9,081.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,094.0	9,096.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,130.0	9,131.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,168.0	9,170.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,238.0	9,239.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,302.0	9,304.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,368.0	9,370.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,438.0	9,439.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,477.0	9,478.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,616.0	9,618.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,667.0	9,669.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

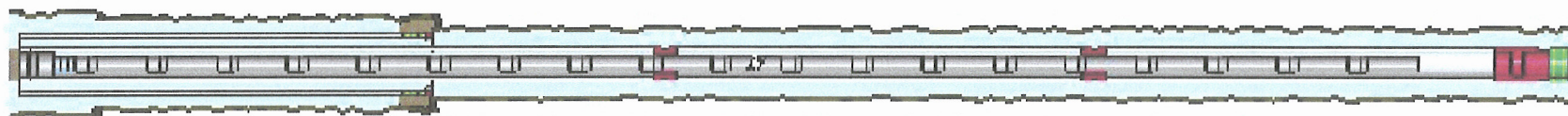
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			9,745.0	9,747.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,773.0	9,775.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,848.0	9,850.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,912.0	9,914.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,002.0	10,004.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,060.0	10,061.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,111.0	10,112.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,166.0	10,166.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,300.0	10,301.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,320.0	10,321.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,062.0	11,064.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,070.0	11,072.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,078.0	11,080.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,088.0	11,090.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,120.0	11,121.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,134.0	11,136.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,153.0	11,154.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,164.0	11,166.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,216.0	11,217.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,227.0	11,228.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,250.0	11,251.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
	MESAVERDE/			11,326.0	11,327.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,338.0	11,340.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,350.0	11,352.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,362.0	11,364.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			11,438.0	11,440.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED	Spud Conductor: 7/27/2011	Spud Date: 7/31/2011
Project: UTAH-UINTAH	Site: NBU 921-19D PAD	Rig Name No: MILES 2/2
Event: COMPLETION	Start Date: 12/1/2011	End Date: 12/15/2011
Active Datum: RKB @4,815.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/1/2011	14:00 - 15:45	1.75	COMP	33		P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 6 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 24 PSI. 1ST PSI TEST T/ 9000 PSI. HELD FOR 30 MIN LOST 113 PSI. NO COMMUNICATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFW
12/5/2011	7:00 - 18:00	11.00	COMP	36	B	P		PERF STG 2)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW FRAC STG 1)WHP 1340 PSI, BRK 4796 PSI @ 4.6 BPM. ISIP 3532 PSI, FG .75. CALC HOLES OPEN @ 50. BPM @ 6185 PSI = 100% HOLES OPEN. ISIP 3707 PSI, FG .76, NPI 175 PSI. MP 7850 PSI, MR 50.9 BPM, AP 6281 PSI, AR 49.7 BPM PUMPED 30/50 TLC SAND IN THIS STAGE X-OVER FOR W L PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 11,281' P/U PERF AS PER PERF DESIGN. POOH. SWIFN
12/6/2011	7:00 - 18:00	11.00	COMP	36	B	P		FRAC STG 2)WHP 2774 PSI, BRK 4228 PSI @ 4.8 BPM. 3463 ISIP PSI, FG .75. WHILE PUMPING PAD HAD 913 BBLS PUMPED, LOST FLUID END ON 1 PUMP AND PACKING ON ANOTHER PUMP SWI WILL CONTINUE FRACING IN A.M. AFTER REPLACING PUMP TRUCK

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011		Spud Date: 7/31/2011	
Project: UTAH-UINTAH		Site: NBU 921-19D PAD			Rig Name No: MILES 2/2
Event: COMPLETION		Start Date: 12/1/2011		End Date: 12/15/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/7/2011	7:00 - 18:00	11.00	COMP	36	B	P		<p>FRAC STG 2)WHP 2774 PSI, BRK 4228 PSI @ 4.8 BPM. ISIP 3463 PSI, FG .75 CALC HOLES OPEN @ 50.1 BPM @ 6081 PSI = 100% HOLES OPEN. ISIP 3841 PSI, FG .78, NPI 378 PSI. MP 8276 PSI, MR 52.2 BPM, AP 6341 PSI, AR 49.9 BPM PUMPED 30/50 TLC SAND IN THIS STAGE X-OVER FOR W L NOTE: CUT SAND SHORT BY 13,112 #</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 11,110' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 3)WHP 3349 PSI, BRK 5528 PSI @ 4.7 BPM. ISIP 4312 PSI, FG .83. CALC HOLES OPEN @ 50 BPM @ 6897 PSI = 100% HOLES OPEN. ISIP 3634 PSI, FG .77, NPI -678 PSI. MP 8188 PSI, MR 51.8 BPM, AP 6849 PSI, AR 49.8 BPM PUMPED 30/50 TLC SAND IN THIS STAGE. SWIFN</p>

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011	Spud Date: 7/31/2011
Project: UTAH-UINTAH	Site: NBU 921-19D PAD		Rig Name No: MILES 2/2
Event: COMPLETION	Start Date: 12/1/2011	End Date: 12/15/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/8/2011	7:00 - 18:00	11.00	COMP	36	B	P		<p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 10,551' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 4)WHP 1549 PSI, BRK 3341 PSI @ 4.4 BPM. ISIP 2628 PSI, FG .70. CALC HOLES OPEN @ 39.5 BPM @ 5194 PSI = 90% HOLES OPEN. ISIP 3229 PSI, FG .76, NPI 601 PSI. MP 6192 PSI, MR 51.0 BPM, AP 5655 PSI, AR 48.9 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 10,034' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 5)WHP 1802 PSI, BRK 3754 PSI @ 4.5 BPM. ISIP 2956 PSI, FG .74 CALC HOLES OPEN @ 49.4 BPM @ 6141 PSI = 91% HOLES OPEN. ISIP 3444 PSI, FG .79, NPI 488 PSI. MP 6286 PSI, MR 50.0 BPM, AP 5828 PSI, AR 47.9 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9805' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 2165 PSI, BRK 3568 PSI @ 4.5 BPM. ISIP 2699 PSI, FG .72. CALC HOLES OPEN @ 41.6 BPM @ 4976 PSI = 92% HOLES OPEN. ISIP 3050 PSI, FG .75, NPI 351 PSI. MP 6103 PSI, MR 51.4 BPM, AP 5417 PSI, AR 50.0 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9508' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 7)WHP 1432 PSI, BRK 4086 PSI @ 4.5 BPM. ISIP 2612 PSI, FG .72 CALC HOLES OPEN @ 34.4 BPM @ 4898 PSI = 68% HOLES OPEN. ISIP 3278 PSI, FG .79, NPI 666 PSI.</p>

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011		Spud Date: 7/31/2011	
Project: UTAH-UINTAH		Site: NBU 921-19D PAD			Rig Name No: MILES 2/2
Event: COMPLETION		Start Date: 12/1/2011		End Date: 12/15/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)			UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/9/2011	6:45 - 7:00	0.25	COMP	48		P		MP 6421 PSI, MR 51.8 BPM, AP 5607 PSI, AR 45.9 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L
	7:00 - 17:00	10.00	COMP	36		P		PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9200' P/U PERF AS PER PERF DESIGN. POOH. SWIFN SAFETY MEETING: RD FRAC EQUIP, CRANES, ETC. FRAC STG 8)WHP 2250 PSI, BRK 2983 PSI @ 4.4 BPM. ISIP 2470 PSI, FG .71 CALC HOLES OPEN @ 45.1 BPM @ 5629 PSI = 71% HOLES OPEN. ISIP 3051 PSI, FG .77, NPI 581 PSI. MP 6369 PSI, MR 509 BPM, AP 5346 PSI, AR 49.5 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L
12/10/2011	6:45 - 7:00	0.25	COMP	48		P		PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8959' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW
	7:00 - 15:00	8.00	COMP	36	B	P		FRAC STG 9)WHP 1755 PSI, BRK 2641 PSI @ 4.6 BPM. ISIP 2123 PSI, FG .68. CALC HOLES OPEN @ 47.1 BPM @ 5013 PSI = 87% HOLES OPEN. ISIP 2979 PSI, FG .78, NPI 856 PSI. MP 6106 PSI, MR 50.0 BPM, AP 4951 PSI, AR 49.1 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L
12/11/2011	6:45 - 7:00	0.25	COMP	48		P		PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8662' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW DURING BREAK DOWN CHEMICAL PUMP BROKE DOWN .WAIT FOR 4 HRS COULDN'T GET PUMP FIXED SWIFN HELD SAFETY MEETING: NEW EQUIPMENT AWARNES WORKED ON NEW BLENDER COULDN'T GET IT TO WORK, NO PUMPING TODAY HELD SAFETY MEETING: RD MOVE OFF LOCATION

US ROCKIES REGION
Operation Summary Report

Well: NBU 921-19D2DS RED		Spud Conductor: 7/27/2011	Spud Date: 7/31/2011
Project: UTAH-UINTAH	Site: NBU 921-19D PAD		Rig Name No: MILES 2/2
Event: COMPLETION	Start Date: 12/1/2011	End Date: 12/15/2011	
Active Datum: RKB @4,815.00usft (above Mean Sea Level)		UWI: NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/1356/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 15:00	8.00	COMP	36	B	P		FRAC STG 10)WHP 1985 PSI, BRK 2730 PSI @ 4.0 BPM. ISIP 2265 PSI, FG .70 CALC HOLES OPEN @ 50.0 BPM @ 4820 PSI = 100% HOLES OPEN. ISIP 2784 PSI, FG .76, NPI 519 PSI. MP 5889 PSI, MR 51.0 BPM, AP 4684 PSI, AR 49.1 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L PU 4 1/2 " CBP RIH SET KILL PLUG @ 8432 POOH SWI RD FRAC & WL CREWS TOTAL SAND= 411,788 # TOTAL CLFL= 19,687 BBLs TRIPPING TBG MIRU, NDWH, NU BOP'S, TEST, PU TBG TIH TO MILLING # KICKPU TBG, TIH TO 8427' TAG PLUG# , MILL 10 PLUGS, CLEAN OUT TO PBTD, PLUG# 1 8,427' 20' SAND 5 MIN 800# KICK PLUG# 2 8,657' 30' SAND 5 MIN 700# KICK PLUG# 3 8,954' 30' SAND 5 MIN 600# KICK PLUG# 4 9,196' 30' SAND 5 MIN 500# KICK PLUG# 5 9,503' 40' SAND 5 MIN 700# KICK PLUG# 6 9,800' 10' SAND 5 MIN 400# KICK PLUG# 7 10,034' 20' SAND 5 MIN 700# KICK PLUG# 8 10,350' 10' SAND 5 MIN 300# KICK PLUG# 9 11,108' 20' SAND 5 MIN 500# KICK PLUG# 10 11,281' 40' SAND 5 MIN 300# KICK CLEAN OUT 90' SAND TO PBTD PBTD 11577' BTM PERF 11440' PULL UP TO 11010' LAND TBG, ND BOP'S, NUWH, DROP BALL, POBS,3000# TURN TO FBC TBG 346 JTS 10981.09' KB 26.00' HANGER .83' S/N 1.875' 2.20' EOT 11010.12' WTR PUMPED 19,687 BBLs WTR RCVD 2,200 BBLs LTR 17487 BBLs 16:30 - PROD 50 WELL TURNED TO SALES @ 1630 HR ON 12/15/2011 - 2000 MCFD, 2040 BWPD, FCP 2950#, FTP 2450#, 20/64" CK
12/14/2011	7:00 - 7:30	0.50	COMP	48		P		
	7:30 - 17:00	9.50	COMP	44		P		
12/15/2011	7:00 - 7:30	0.50	COMP	48		P		
	7:30 - 17:30	10.00	COMP	44		P		

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well Information

Well	NBU 921-19D2DS RED	Wellbore No.	OH
Well Name	NBU 921-19D2DS	Common Name	NBU 921-19D2DS
Project	UTAH-UINTAH	Site	NBU 921-19D PAD
Vertical Section	279.43 (°)	North Reference	True
Azimuth		Origin E/W	
Origin N/S		UWI	NW/NW/0/9/S/21/E/19/0/0/26/PM/N/482/W/0/135 6/0/0
Spud Date	7/31/2011		
Active Datum	RKB @4,815.00usft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	WEATHERFORD
Started	7/31/2011	Ended	
Tool Name	MWD	Engineer	Anadarko

2.1.1 Tie On Point

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)
22.00	0.00	0.00	22.00	0.00	0.00

2.1.2 Survey Stations

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Buld (°/100usft)	Turn (°/100usft)	TFace (°)
7/31/2011	Tie On	22.00	0.00	0.00	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/31/2011	NORMAL	198.00	1.59	151.18	197.98	-2.14	1.18	-1.51	0.90	0.90	0.00	151.18
	NORMAL	285.00	0.50	209.17	284.96	-3.53	1.57	-2.13	1.60	-1.25	66.66	162.25
	NORMAL	372.00	1.40	258.63	371.95	-4.07	0.35	-1.01	1.31	1.03	56.85	68.92
	NORMAL	462.00	2.63	269.77	461.89	-4.29	-2.80	2.05	1.43	1.37	12.38	23.28
	NORMAL	552.00	4.25	279.14	551.73	-3.77	-8.15	7.43	1.90	1.80	10.41	23.86
	NORMAL	642.00	5.88	282.39	641.38	-2.25	-15.95	15.36	1.84	1.81	3.61	11.61
	NORMAL	732.00	7.63	284.14	730.75	0.19	-26.25	25.92	1.96	1.94	1.94	7.58
	NORMAL	822.00	9.75	283.27	819.71	3.40	-39.46	39.48	2.36	2.36	-0.97	-3.98
	NORMAL	912.00	11.88	283.64	908.11	7.34	-55.88	56.33	2.37	2.37	0.41	2.05
	NORMAL	1,002.00	13.75	284.39	995.86	12.18	-75.25	76.22	2.09	2.08	0.83	5.45
	NORMAL	1,092.00	15.38	282.39	1,082.97	17.40	-97.26	98.80	1.90	1.81	-2.22	-18.12
	NORMAL	1,182.00	17.13	281.77	1,169.36	22.67	-121.90	123.97	1.95	1.94	-0.69	-5.96
	NORMAL	1,272.00	19.38	282.52	1,254.83	28.61	-149.46	152.12	2.51	2.50	0.83	6.32
	NORMAL	1,362.00	19.69	282.52	1,339.65	35.13	-178.83	182.17	0.34	0.34	0.00	0.00
8/1/2011	NORMAL	1,452.00	20.31	282.26	1,424.22	41.73	-208.90	212.91	0.70	0.69	-0.29	-8.28
	NORMAL	1,542.00	19.75	280.52	1,508.78	47.83	-239.11	243.72	0.91	-0.62	-1.93	-134.03
	NORMAL	1,632.00	20.93	280.70	1,593.16	53.59	-269.86	274.99	1.31	1.31	0.20	3.12

2.1.2 Survey Stations (Continued)

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
8/1/2011	NORMAL	1,722.00	21.25	280.77	1,677.14	59.62	-301.68	307.37	0.36	0.36	0.08	4.53
	NORMAL	1,812.00	22.13	281.27	1,760.76	65.98	-334.33	340.62	1.00	0.98	0.56	12.09
	NORMAL	1,902.00	22.44	283.02	1,844.04	73.17	-367.69	374.71	0.81	0.34	1.94	65.77
	NORMAL	1,992.00	22.56	282.89	1,927.19	80.89	-401.25	409.08	0.14	0.13	-0.14	-22.58
	NORMAL	2,082.00	22.31	283.89	2,010.38	88.84	-434.67	443.35	0.51	-0.28	1.11	123.69
	NORMAL	2,172.00	21.44	282.89	2,093.90	96.61	-467.28	476.80	1.05	-0.97	-1.11	-157.28
	NORMAL	2,262.00	20.56	279.27	2,177.92	102.82	-498.92	509.02	1.74	-0.98	-4.02	-125.83
	NORMAL	2,352.00	20.63	283.14	2,262.18	108.98	-529.96	540.65	1.51	0.08	4.30	88.87
	NORMAL	2,442.00	19.22	282.31	2,346.79	115.74	-559.87	571.27	1.60	-1.57	-0.92	-169.05
	NORMAL	2,532.00	18.44	280.77	2,431.97	121.56	-588.33	600.29	1.03	-0.87	-1.71	-148.22
	NORMAL	2,622.00	16.75	281.02	2,517.76	126.70	-615.04	627.49	1.88	-1.88	0.28	177.56
	NORMAL	2,712.00	15.25	279.64	2,604.27	131.16	-639.44	652.29	1.72	-1.67	-1.53	-166.43
	NORMAL	2,802.00	12.81	278.52	2,691.58	134.62	-660.98	674.11	2.73	-2.71	-1.24	-174.19
	NORMAL	2,872.00	12.15	276.27	2,759.92	136.57	-675.98	689.22	1.17	-0.94	-3.21	-144.72

2.2 Survey Name: Survey #2

Survey Name	Survey #2	Company	WEATHERFORD
Started	9/26/2011	Ended	
Tool Name	MWD	Engineer	Anadarko Employee

2.2.1 Tie On Point

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)
2,932.00	11.58	274.34	2,932.00	137.43	-688.33

2.2.2 Survey Stations

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
9/26/2011	Tie On	2,932.00	11.58	274.34	2,932.00	137.43	-688.33	701.55	0.00	0.00	0.00	0.00
9/26/2011	NORMAL	2,994.00	11.49	276.24	2,992.75	138.57	-700.67	713.91	0.63	-0.15	3.06	104.26
	NORMAL	3,033.00	9.34	274.00	3,031.10	139.22	-707.69	720.94	5.61	-5.51	-5.74	-170.43
9/27/2011	NORMAL	3,128.00	7.00	277.88	3,125.13	140.55	-721.12	734.40	2.53	-2.46	4.08	168.66
	NORMAL	3,223.00	5.63	284.51	3,219.56	142.51	-731.37	744.83	1.63	-1.44	6.98	155.24
	NORMAL	3,317.00	4.31	300.76	3,313.21	145.47	-738.86	752.71	2.04	-1.40	17.29	141.06
	NORMAL	3,411.00	3.63	317.38	3,406.98	149.47	-743.92	758.35	1.41	-0.72	17.68	128.70
	NORMAL	3,506.00	3.31	338.51	3,501.81	154.23	-746.96	762.13	1.38	-0.34	22.24	114.44
	NORMAL	3,600.00	3.25	355.76	3,595.66	159.41	-748.15	764.16	1.05	-0.06	18.35	102.06
	NORMAL	3,695.00	2.44	353.51	3,690.54	164.11	-748.58	765.35	0.86	-0.85	-2.37	-173.27
	NORMAL	3,789.00	1.75	343.76	3,784.48	167.48	-749.20	766.52	0.82	-0.73	-10.37	-157.50
	NORMAL	3,884.00	1.19	330.51	3,879.45	169.73	-750.09	767.77	0.69	-0.59	-13.95	-155.25
	NORMAL	3,978.00	0.38	57.76	3,973.44	170.74	-750.31	768.15	1.31	-0.86	92.82	162.05
	NORMAL	4,073.00	0.31	174.26	4,068.44	170.65	-750.02	767.84	0.62	-0.07	122.63	151.84
	NORMAL	4,167.00	0.63	199.88	4,162.44	169.92	-750.17	767.87	0.40	0.34	27.26	46.55
	NORMAL	4,262.00	0.81	193.38	4,257.43	168.77	-750.50	768.01	0.21	0.19	-6.84	-27.68
	NORMAL	4,356.00	0.69	336.88	4,351.43	168.65	-750.88	768.36	1.52	-0.13	152.66	163.26
	NORMAL	4,450.00	0.25	297.13	4,445.42	169.26	-751.28	768.86	0.56	-0.47	-42.29	-162.20
	NORMAL	4,545.00	0.38	301.13	4,540.42	169.52	-751.74	769.35	0.14	0.14	4.21	11.61
	NORMAL	4,639.00	0.25	264.51	4,634.42	169.66	-752.21	769.84	0.25	-0.14	-38.96	-140.26
	NORMAL	4,734.00	0.44	232.13	4,729.42	169.41	-752.70	770.29	0.28	0.20	-34.08	-62.71
	NORMAL	4,828.00	0.69	202.76	4,823.41	168.67	-753.21	770.66	0.40	0.27	-31.24	-64.51
	NORMAL	4,923.00	1.00	174.51	4,918.40	167.32	-753.35	770.58	0.54	0.33	-29.74	-68.03

2.2.2 Survey Stations (Continued)

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
9/27/2011	NORMAL	5,017.00	0.44	359.13	5,012.40	166.86	-753.28	770.44	1.53	-0.60	-186.57	-178.59
	NORMAL	5,112.00	0.56	53.01	5,107.40	167.51	-752.91	770.18	0.49	0.13	56.72	103.65
9/28/2011	NORMAL	5,206.00	0.44	66.43	5,201.39	167.93	-752.21	769.56	0.18	-0.13	14.28	142.28
	NORMAL	5,301.00	0.50	123.51	5,296.39	167.84	-751.53	768.88	0.48	0.06	60.08	111.85
	NORMAL	5,400.00	0.69	143.38	5,395.38	167.13	-750.82	768.05	0.28	0.19	20.07	57.58
	NORMAL	5,490.00	0.88	161.88	5,485.38	166.04	-750.28	767.34	0.35	0.21	20.56	62.63
	NORMAL	5,585.00	0.63	161.26	5,580.37	164.85	-749.88	766.76	0.26	-0.26	-0.65	-178.44
	NORMAL	5,585.00	0.63	161.26	5,580.37	164.85	-749.88	766.76	0.00	0.00	0.00	0.00
	NORMAL	5,679.00	0.81	148.51	5,674.36	163.79	-749.37	766.08	0.26	0.19	-13.56	-48.16
	NORMAL	5,774.00	0.25	54.88	5,769.36	163.34	-748.85	765.49	0.91	-0.59	-98.56	-163.19
	NORMAL	5,868.00	0.06	40.88	5,863.36	163.49	-748.65	765.32	0.20	-0.20	-14.89	-175.67
	NORMAL	5,963.00	0.31	83.51	5,958.36	163.56	-748.36	765.05	0.28	0.26	44.87	51.32
	NORMAL	6,057.00	0.44	95.76	6,052.35	163.55	-747.75	764.44	0.16	0.14	13.03	37.89
	NORMAL	6,152.00	0.63	135.13	6,147.35	163.15	-747.02	763.65	0.42	0.20	41.44	83.29
	NORMAL	6,246.00	0.56	156.76	6,241.35	162.36	-746.47	762.99	0.25	-0.07	23.01	117.93
	NORMAL	6,341.00	0.88	153.76	6,336.34	161.28	-745.97	762.31	0.34	0.34	-3.16	-8.22
	NORMAL	6,436.00	0.75	347.51	6,431.33	161.23	-745.78	762.12	1.70	-0.14	-175.00	-173.68
	NORMAL	6,530.00	0.25	3.38	6,525.33	162.04	-745.90	762.37	0.55	-0.53	16.88	172.36
	NORMAL	6,625.00	0.06	36.38	6,620.33	162.28	-745.86	762.37	0.21	-0.20	34.74	170.71
	NORMAL	6,719.00	0.00	180.26	6,714.33	162.32	-745.83	762.35	0.06	-0.06	0.00	180.00
	NORMAL	6,814.00	0.31	172.76	6,809.33	162.07	-745.80	762.27	0.33	0.33	0.00	172.76
	NORMAL	6,908.00	0.63	193.38	6,903.33	161.31	-745.88	762.23	0.38	0.34	21.94	38.43
	NORMAL	7,002.00	0.69	178.88	6,997.32	160.24	-745.99	762.17	0.19	0.06	-15.43	-77.59
	NORMAL	7,097.00	0.94	178.51	7,092.31	158.89	-745.96	761.91	0.26	0.26	-0.39	-1.39
	NORMAL	7,191.00	1.25	171.88	7,186.29	157.11	-745.80	761.46	0.36	0.33	-7.05	-25.57
	NORMAL	7,286.00	0.94	172.01	7,281.28	155.31	-745.54	760.91	0.33	-0.33	0.14	179.61
	NORMAL	7,380.00	1.00	163.20	7,375.26	153.76	-745.20	760.32	0.17	0.06	-9.37	-72.53
9/29/2011	NORMAL	7,475.00	1.13	181.38	7,470.25	152.03	-744.98	759.82	0.38	0.14	19.14	78.21
	NORMAL	7,569.00	0.88	190.38	7,564.23	150.39	-745.13	759.70	0.31	-0.27	9.57	152.18
	NORMAL	7,664.00	1.25	186.26	7,659.22	148.65	-745.38	759.66	0.40	0.39	-4.34	-13.76
	NORMAL	7,758.00	1.19	192.88	7,753.19	146.68	-745.71	759.66	0.16	-0.06	7.04	116.35
	NORMAL	7,853.00	1.38	181.38	7,848.17	144.57	-745.95	759.56	0.34	0.20	-12.11	-59.46
	NORMAL	7,947.00	1.13	185.51	7,942.15	142.52	-746.07	759.34	0.28	-0.27	4.39	162.17
	NORMAL	8,042.00	1.38	184.01	8,037.12	140.44	-746.24	759.17	0.27	0.26	-1.58	-8.24
	NORMAL	8,136.00	1.00	144.51	8,131.11	138.64	-745.84	758.48	0.94	-0.40	-42.02	-133.72
	NORMAL	8,236.00	1.00	145.63	8,231.09	137.21	-744.84	757.26	0.02	0.00	1.12	90.56
	NORMAL	8,325.00	0.88	159.26	8,320.08	135.93	-744.16	756.38	0.28	-0.13	15.31	124.92
	NORMAL	8,420.00	1.00	165.63	8,415.07	134.45	-743.70	755.68	0.17	0.13	6.71	44.26
	NORMAL	8,514.00	0.81	151.51	8,509.05	133.07	-743.18	754.94	0.31	-0.20	-15.02	-137.34
	NORMAL	8,609.00	1.00	158.13	8,604.04	131.71	-742.55	754.10	0.23	0.20	6.97	32.16
	NORMAL	8,703.00	0.94	144.01	8,698.03	130.33	-741.79	753.12	0.26	-0.06	-15.02	-111.08
9/30/2011	NORMAL	8,798.00	1.38	125.63	8,793.01	129.03	-740.40	751.54	0.60	0.46	-19.35	-49.65
	NORMAL	8,892.00	1.31	118.13	8,886.98	127.86	-738.54	749.51	0.20	-0.07	-7.98	-115.41
	NORMAL	8,987.00	1.88	134.38	8,981.95	126.26	-736.46	747.20	0.76	0.60	17.11	46.74
	NORMAL	9,081.00	1.88	135.26	9,075.90	124.09	-734.28	744.69	0.03	0.00	0.94	90.44
	NORMAL	9,176.00	2.00	133.13	9,170.84	121.85	-731.97	742.04	0.15	0.13	-2.24	-32.07
	NORMAL	9,270.00	2.31	131.76	9,264.78	119.46	-729.36	739.08	0.33	0.33	-1.46	-10.12
	NORMAL	9,365.00	2.38	132.01	9,359.70	116.87	-726.47	735.80	0.07	0.07	0.26	8.44
	NORMAL	9,459.00	1.88	134.76	9,453.63	114.48	-723.92	732.90	0.54	-0.53	2.93	169.82
	NORMAL	9,553.00	2.00	129.13	9,547.58	112.36	-721.55	730.21	0.24	0.13	-5.99	-60.64
	NORMAL	9,648.00	2.31	137.26	9,642.51	109.90	-718.97	727.26	0.46	0.33	8.56	48.71
	NORMAL	9,743.00	2.25	121.63	9,737.44	107.52	-716.08	724.02	0.66	-0.06	-16.45	-103.29
10/1/2011	NORMAL	9,837.00	2.38	110.26	9,831.36	105.88	-712.68	720.40	0.51	0.14	-12.10	-79.93
	NORMAL	9,932.00	2.31	115.63	9,926.28	104.36	-709.10	716.62	0.24	-0.07	5.65	110.34
	NORMAL	10,026.00	2.56	123.38	10,020.20	102.39	-705.64	712.88	0.44	0.27	8.24	56.71

2.2.2 Survey Stations (Continued)

Date	Type	MD (usft)	Inc (°)	Azi (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	TFace (°)
10/2/2011	NORMAL	10,121.00	2.50	124.13	10,115.10	100.06	-702.16	709.06	0.07	-0.06	0.79	151.49
	NORMAL	10,215.00	2.31	119.13	10,209.02	97.99	-698.80	705.42	0.30	-0.20	-5.32	-134.64
	NORMAL	10,310.00	2.50	118.26	10,303.94	96.07	-695.31	701.65	0.20	0.20	-0.92	-11.31
	NORMAL	10,404.00	2.56	123.38	10,397.84	93.95	-691.75	697.79	0.25	0.06	5.45	77.70
	NORMAL	10,499.00	2.63	128.01	10,492.75	91.44	-688.26	693.94	0.23	0.07	4.87	73.86
	NORMAL	10,593.00	3.00	130.38	10,586.63	88.52	-684.69	689.94	0.41	0.39	2.52	18.65
	NORMAL	10,688.00	3.25	129.01	10,681.49	85.21	-680.70	685.46	0.27	0.26	-1.44	-17.32
10/3/2011	NORMAL	11,067.00	3.19	141.63	11,059.90	70.18	-665.81	668.31	0.19	-0.02	3.33	101.12
	NORMAL	11,161.00	3.25	140.38	11,153.75	66.08	-662.48	664.36	0.10	0.06	-1.33	-50.11
	NORMAL	11,256.00	3.38	145.63	11,248.59	61.69	-659.18	660.38	0.35	0.14	5.53	69.45
10/6/2011	NORMAL	11,614.00	3.38	145.63	11,605.97	44.27	-647.27	645.78	0.00	0.00	0.00	0.00

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